Only 48p!

Shareware: pay-when-you-like PC software explained – page 8

Issue 13 • Feb 4 1989

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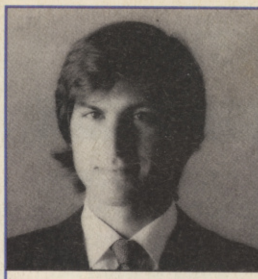


JOBS FOR ALL

Steve Jobs: The man who invented the personal computer and made a million – page 23

Soccer ID on the cards

How computers will change Saturday afternoons for better or worse

– page 14

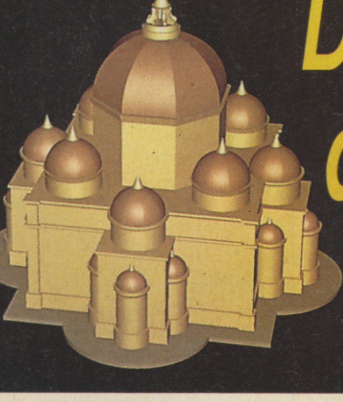
Columns packed with news and facts for YOUR machine – pages 44–51

- Atari ST
- PC
- Amiga
- Spectrum
- C64
- CPC
- PCW
- QL
- BBC
- MSX

KONIX STUNNER

Revolutionary system brings arcades to your homes

– page 2



Digitised da Vinci

Computers are recreating Leonardo's masterpieces

– page 26

– page 16

AMIGA ESSENTIALS

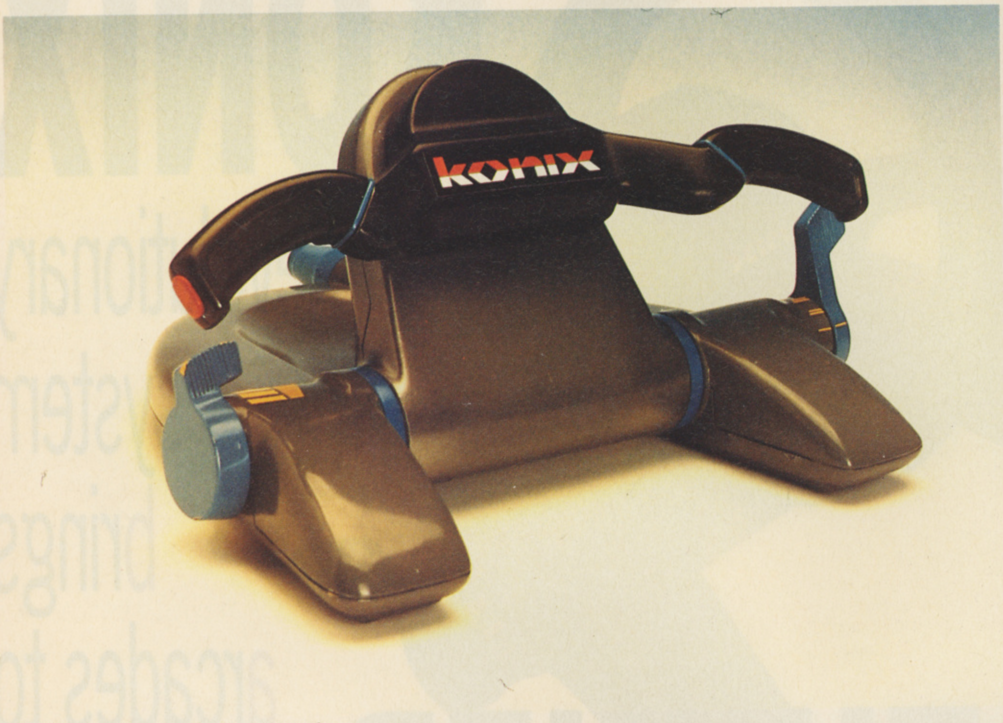
Express presents the pick of the software bunch

Charts 5 • Letters 11 • Beginners 20 • Entertainment 30 • Transfolink 36 • Tips 39 • Vouchers 41 • Columns 44 • PSsst! 54

REVEALED

At last: Konix unleashes revolutionary games machine

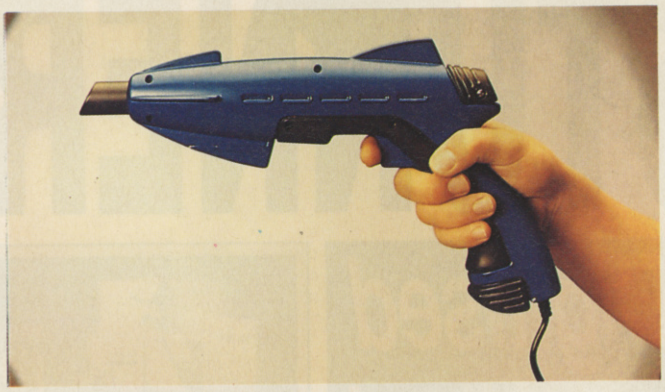
• Holloway: Massive investment



• Multi System: Arcade realism in your home?

After months of increasingly frenetic speculation, Konix has finally unveiled its revolutionary Multi System games console.

The space-age style 3.5 inch disk-based machine is scheduled to hit the streets in six months at a basic price of £199. What makes the machine stand out is its detachable steering wheel and separate pedal unit. It also sports two joystick ports and sockets to plug in peripherals that will include a light gun. An arcade-style chair will be made available, ideally for £130 according to Konix.



• One of Konix's many planned peripherals

Konix plans to bring the increasingly sophisticated style of arcade entertainment into the home with the line-up of low cost gadgetry, designed to emulate the likes of the original *Out Run*, *Afterburner* and *Super Hang On* machines.

As revealed in *Express* (Issue 2), much of the machine's innards have been sourced from Flare Technology. Flare already had much of the hardware up and running by last July but didn't have a concrete deal with a manufacturer. Konix approached the firm with its idea for a new console and work began.

The Multi System incorporates the 16-bit 8086 processor, but custom silicon is at the heart of the hardware. Flare's Blitter and Digital Signal Processor have been integrated into an ultra large-scale integration chip, designed in conjunction with Flare by Chris Green and Konix's team of engineers.

Control modes may be configured on the basic unit by disengaging a clutch mechanism and rearranging the main pillar or bolting on peripherals. Car, motorcycle and aeroplane modes are available on the standard machine, and a helicopter control yoke (à la *Thunderblade*) is on the drawing board. For added arcade realism, the steering device can be programmed to judder when the player crashes in a game.

Konix, based in Ebbw Vale, says it has invested "everything" in the project. The firm has risen over the past few years with its joystick range spearheaded by the successful Speedking. Boss Wyn Holloway commented: "The whole system is designed for fun and for realism. What we're trying to do is make a family machine that offers realistic simulations but has still got a joystick port so that you can load up standard arcade games."

He added: "Everyone who has seen the prototypes has said this is their dream – we're giving people an arcade in their home."

Development machines have not yet been made available to software houses – Konix is apparently talking to over 30 companies, but work is still proceeding on hardware and software for software developers. The first batch of releases for the Multi System are likely to be reworked versions of top ten hits, in particular those with driving, riding or flying overtones. ●

Tech Spec

All the electronics fit on a 6" by 4.75" circuit board. A 16-bit custom chip contains the video generator, colour palette, disk controller, Blitter, ROM, fast RAM, 12 MIP Arithmetic and Logic Unit, RISC Digital Signal Processor, stereo compact dick DACs and digital and analogue ports – around as many gates as contained in a 68000.

While the basic unit has only 128K of memory, the advanced design of the hardware, coupled with a disk drive that can load data while a game is actually being played, means that complex and sophisticated software can run on the Multi System. In effect, the disk drive acts as a cartridge. Memory expansion cartridges may be made available, according to Konix, but only if RAM prices fall to a reasonable level.

All the facts

The full story on the development of the Multi System appears in the current issue of our sister magazine *Advanced Computer Entertainment* (*ACE*) on sale today (Thursday, 2nd February). For a detailed description of how the console works and a run-down on its development history, check out the six-page Multi System feature. A full review will also appear in next week's *Express*.

HARD DISK FAULT HITS NEW AMSTRAD PC

Amstrad was last week warning its dealers of a fault which has emerged on its PC 2086 HD machines.

The mistake was found to be in the hard disk controller and, according to Amstrad, is found in some 15 per cent of the machines. When it occurs the 2086 crashes because of data read or write errors. Dealers are being urged to check the machines on stock and to stop them getting out to the general public.

The problem can be solved by soldering a tiny disc capacitor between a pin in the hard drive and a suitable ground point. Amstrad says that this operation can be done "with extreme caution" without having to take the hard disk out of its cabinet. Amstrad is urging dealers to perform the PC surgery "as soon as possible".

Amstrad has experienced more problems than usual over the past few months. Last year the new Spectrum +2A was having compatibility problems with the earlier version. Amstrad PCWs imported from Germany weren't fully compatible with existing peripherals and the launch of the PC200 was marred by distribution foul-ups through retail chain Comet.

"I suppose as a company grows it becomes more and more difficult to put the cap on every problem," offered a spokesman. "I think we've acted very swiftly and this is just with the one model," he said.

Some have suggested that more problems seem to occur as Amstrad's boss Alan Sugar becomes more preoccupied with projects other than computers. The launch of the Astra satellite TV system looms ever closer.

Amstrad suggests that any PC2086 owners who are experiencing hard disk problems should get in touch with the dealers where they bought their machines.

• PC2086: Hard disk fault

It is clear that some software publishers are prepared to see Wyn Holloway and the Konix Multi System as potential saviours of the industry. There is a feeling that fairly soon Japanese companies including Sega, Nintendo and NEC will make a serious push into the UK market.

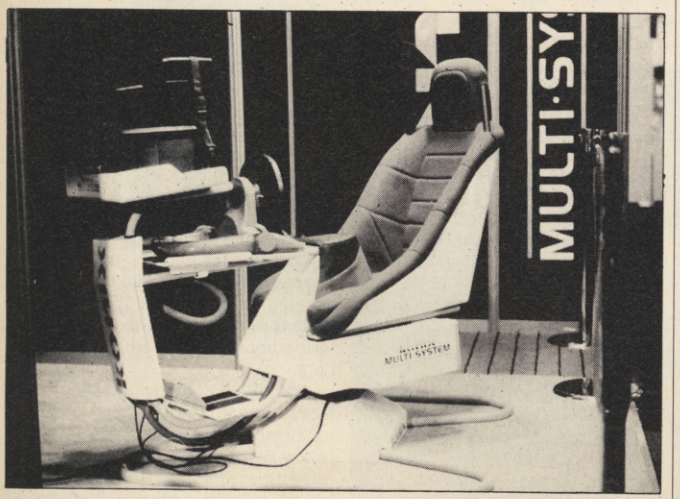
The Japanese, so the theory goes, will achieve European domination – either by taking over the hardware market and removing the user base for which UK software houses currently write, or by taking over the software publishing industry itself.

Mark Cale of System 3 subscribes to this 'conspiracy theory'. "It worries me the way the Japanese companies have now got such a strong hold on the US market – which no-one though possible a few years ago. Today, Nintendo has 82 per cent of the American market, and to publish for the Nintendo in the States you need hundreds of thousands of dollars to put up front. Most software houses in this country simply can't compete at that level of investment."

"What we have seen from Konix is one of the most exciting hardware developments for some time."
Geoff Brown, US Gold boss.

Piracy, too, is a major concern of software houses. Licence and development costs are rising continually, as consumers demand more and more sophisticated entertainment products for the current generation of home computers. Even though the hardware is still selling, unit sales of titles don't appear to be increasing. "About 150,000 new C64s are sold every year, so how come a C64 best seller still only shifts around 70,000 units?" Cale asks. The answer is simple – "for every copy you sell, there are about 10 pirate copies out there."

The high level of piracy protection claimed for the Multi System, with its specially duplicated disks, is attractive to software publishers. The system has all the security of a cartridge-based console but doesn't require upfront investment in the media before a game can be launched.



• THE KONIX HOT SEAT: A prototype of the arcade chair, driven by three electric drill motors and controlled by a joystick rather than by a Multi System game

CONTENTS

COVER FEATURES

NEWS COMMENT 14
Soccer ID: smart cards, or carte blanche for the Government?
EXPRESS SPECIAL 16
The best in Amiga software
DA VINCI ON DISK 26
If only Leonardo had had a micro...
ST TO PC TO PPC 36
Data transfer problems a thing of the past? We review Transfolink

REGULARS

EXPRESS COMMENT 4
CHARTS 5
LETTERS 11
MICROBIOGRAPHY
The fortunes of Steve Jobs 23
BEGINNERS 20
Databases: your from-zero guide
GAMES 30-31
Captain Fizz, The Games Winter Edition, Slipstream, Billiards Simulator, Advanced Ski Simulator, Zany Golf
GAME PREVIEWS 32
King of the Beach, King of Chicago, Rocket Ranger, DNA Warrior, Dragonscape, Vindicators
RELEASE SCHEDULE 34
TECH TIPS 39
VOUCHERS 41
YOUR MACHINE
ST 44
PC 45
Amiga 46
Spectrum 47
Commodore 64 48
CPC 49
PCW, QL 50
BBC, MSX 51
SUBS 52
PSsst... 54

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COMMENT

In the driving seat

The implications of Konix's new machine are far-reaching. Until now the word 'console' has had a dead-end feeling to it – it's hard to get excited about something that looks so nondescript and which only lets you play games. Wyn Holloway's visionary machine however aims not just to let you imitate flight simulators, play racing car games and shoot up aliens, but to give you the 'total experience'. Hence the fact that the control tiller can be swivelled into a steering wheel, plane joystick or motorbike handlebars, and the add-ons like a recoiling light gun and a £130 flight chair that pitches, rolls and yaws just like those cabinets in the arcades – and even judders when you crash.

If it succeeds, the system will take computer leisure into another era. The eternal demand for better graphics and more sophisticated games will push us towards better graphics from CDs and faster processors, but this is a difference of degree, not kind. Konix is aiming to bring the arcade machines themselves into our homes, hydraulic chairs and all. The difference between home leisure consoles and military or civilian flight simulators will become increasingly blurred.

Competitors in the console market – Sega, Nintendo et al – will be hoping desperately that Konix blows it – which it easily could: £130 is a tight budget to fit a hydraulic chair into and a flimsy product could ruin everything. And the software will have to be good too, and exploit the astounding features – Konix is said to be handling the duplication of the specially-formatted disks itself in a bid to beat the software pirates.

But if Konix does get it right – and many people believe it will – then the judders felt by Sega and Nintendo might go further than the seat they are sitting in.

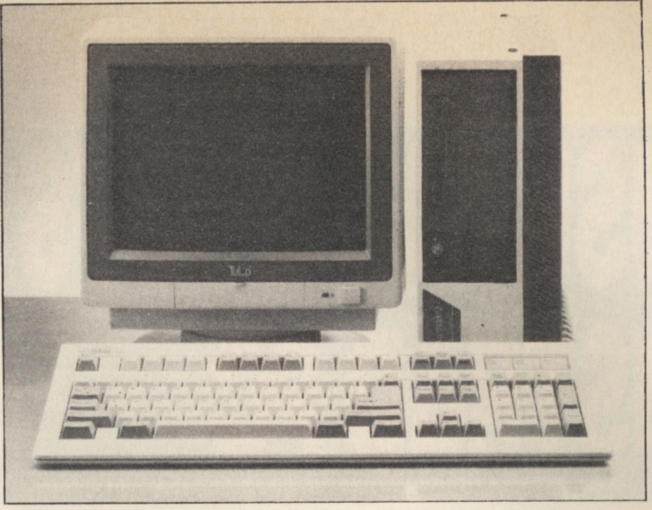
2p or not 2p

Amstrad has been typically dismissive of the fault on its PC2000 range, some of which have problems with the hard disk controller. It can be rectified, says Amstrad, by a 560pF disk capacitor – 'a simple job involving a twopenny gadget that could be done in a minute'. So why didn't Amstrad charge 2p more and take one minute longer to deliver it in the first place?

Perhaps its corporate mind is on higher things, such as satellite TV? That is the question.

Where there's muck

In the increasingly technological world of farming, the latest advance promises to save money by saving muck. Soil Teq has developed a computer system which controls fertilizer spreading so that a nutritious blend is laid out evenly on the soil. Farmers who've tested the system reckon they're saving between £4 and £10 an acre.


• SX Compact 2: Price breaker

DUTCH TULIP 386 PC BREAKS £2000 BARRIER

Dutch computer manufacturer Tulip last week unveiled what is being claimed as the cheapest 386 compatible PC on the market.

The 20 Mb SX Compact 2 retails at £1,999 and sports 1Mb as standard internal memory, expandable to 3Mb on the motherboard. The machine has the smallest footprint of any 386 – half the size of rivals. Tulip is boasting a hard disk access time of 30 milliseconds.

A 386SX machine is one which gives the user a 32-bit software environment using an Intel 16-bit chip. Although this sounds perverse it allows users to run 32-bit software on a 16-bit machine. Also, normal PC software will run at a faster speed.

386SX machines have already been launched by high end makers such as Compaq, NCR and Apricot. They are still cheaper than 'true' 386s.

"It's the most strategically important machine we've yet launched," said Tulip's UK managing director Steve McCall. "People increasingly need more and more performance to run processor intensive applications such as large spreadsheets, databases etc."

The machine is said to be fully compatible with 386 specific software. A 40Mb version is also available for £2,245.

Meantime, Tulip has cut the price of its entry level PC Compact 2. It's down from £950 to £895.

Cheap at half the price

Samna has introduced a half price introductory offer for its new word processing package *Ami*.

The PC package will cost £99 for "a limited period". It will be shown for the first time at the forthcoming *Which Computer?* Show. Samna is also holding a series of introductory seminars for the package. More details on 01 587 1121.

Mighty Robocop stalled by bug

Ocean's hit game *Robocop* has hit trouble on the Amstrad CPC with new versions having to be rushed onto the streets.

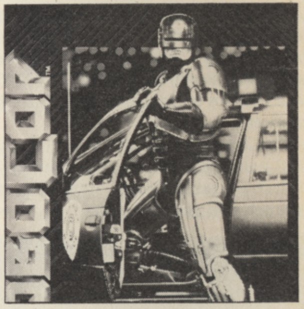
The game was released just before Christmas, but a whole batch of them were bugged so badly that they would not load. Ocean's staff arrived back in the New Year to a growing number of returns coming through the door – one shop reported that it had experienced a 90 per cent return rate.

Ocean drafted in the duplicators for a bout of overtime in order to churn out a new batch of debugged games. These should now be the only ones available.

"It was a big hiccup for us and it couldn't really have happened on a worse game at a worse time of the year," said Ocean's Gary Bracey. "Although one batch went wrong the overall number wasn't that high. I think 90 per cent is certainly an exaggeration." *Robocop* is currently at number one in the Gallup all format charts.

He thought it unlikely that bugged versions would still be available but advised any unfortunate buyers to return such games to Ocean.

Meanwhile, Code Masters' *Treasure Island Dizzy* has experienced similar problems, crashing half way through. Again, that firm claims all dodgy units have been cleared up – but if not users should return their game to Code Masters.



• Robocop: Bug hiccup

Accu–Tech takes the strain

Daily Telegraph

• Accu-Type: Preventative

The problem of repetitive strain injury (RSI) through constant use of computer keyboards is being tackled by Accu-Tech Software.

The firm has developed a software-based course which teaches PC users how to use their machines without straining muscles in the arm. RSI is becoming more common in professions which require long periods of using a computer keyboard. Because word processing is more automated than traditional typewriting the user's hands tend never to leave the keyboard for, say, pushing a carriage return. Trade unions are looking closely at the RSI problem. Sufferers can be left in great pain, sometimes having to leave their jobs.

Accu-Type costs £125 and, according to the company, causes minimal disruption of normal work. Accu-Tech is labelling it a good investment for companies given the threat of legal claims from afflicted users.

EPYX TO POACH EURO TALENT

Are you a genius at writing games? US games giant Epyx is looking to poach Europe's most talented games writers.

The firm has already set up a beachhead office in Reading in order to sniff out willing programmers. Epyx will then be publishing the games in North America and the rest of the world. Ironically, the games will not be published by Epyx here – its titles are published in Europe via a deal with US Gold. That contract is up for renewal in September.

"There's an untapped pool of talented software developers in Europe, especially in England," said Epyx UK's David Bishop. "We've sold European games in North America such as *Nebulus* but that has the disadvantage of being a finished product before we get to look at it.

"North Americans are finally willing to concede that there's a hell of a lot of talent here. But there are all sorts of countries with untapped resources such as Scandinavia and even the Eastern Bloc. Look at *Tetris* from Moscow."

Bishop is planning to talk to developers over the next few months. He can be contacted on 0734 313966 – or 00 44 734 313966 if you live in Europe.

Einstein a go go

Hordes of Einstein users will no doubt be beating a path Birmingam way in April for the National Einstein Exhibition.

The show – admission 50p – boasts six stands and there should be some new products available including a £60 midi interface. "People who have Einsteins love them and want to keep them. It's not often that they can get new software and Birmingham is pretty central," said an organiser. He predicted that 1,000 loyal users would turn up.

The National Einstein Exhibition will be held at the National Motorcycle Museum, near the NEC, Birmingham on Saturday April 22 between 10AM and 5PM. More info on 0473 49507.

CRL HYPES NEW MEDIA

• Chambers: New strain

Games software house CRL is planning to launch a new strain of games called the Hypermedia series.

The firm claims that the games will be the first interactive action cartoons. They can simply be watched in much the same way as a half hour cartoon or, of course, they can be played.

CRL's boss Clement Chambers also claimed that they will include "the best music yet on the Amiga". The first game, *Rumble*, will appear on the Amiga and ST for between £25 and £30 and on five or six disks.

"These Americans have been talking about compact disc interactive for years. But the technology isn't there," Chambers told *Express*. "We decided to put it on the machines that are available."

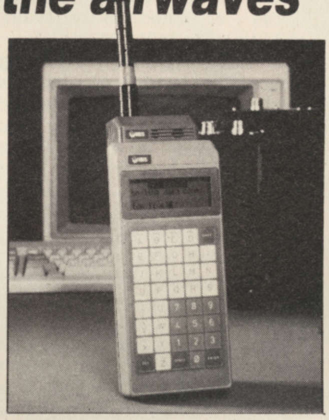
CRL appears to be emerging from a difficult time following well publicised legal shenanigans with former bedfellow Electronic Arts which brought the firm close to the brink. It is lining up a string of normal releases and, according to Chambers, has managed to pull through.

Computing on the airwaves

A handheld computer which can transfer data through a radio transmitter has been developed by Immediate Business Systems.

Initially, the firm sees it as being ideal for use throughout industry. In effect any company purchasing it would receive the one kilogram portables and a 'home base' radio receiver. Information punched into the handheld could then be transmitted through the air waves and directed toward a central PC.

"We see this as being very much a revolutionary product and a technical breakthrough," offered a spokesman. "It's possibly the most innovative and versatile system of its kind yet created."



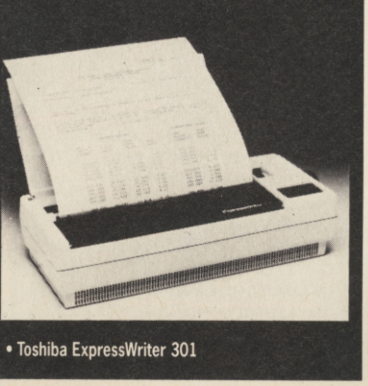
• IBS: Radio PC

Toshiba carries out portable printer plan

A portable printer is soon to be launched by Toshiba.

Costing £345, the ExpressWriter 301 weighs less than four pounds. It prints at 60cps in draft mode. The PC-compatible printer is being labelled by Toshiba as "the perfect travelling companion to our range of PCs".

It can print for up to an hour on rechargeable batteries or can be plugged into a normal wall socket.



• Toshiba ExpressWriter 301

GAMES TOP TWENTY FULL PRICE

1	2	Robocop	Spectrum, C64, CPC	OCEAN
2	3	Afterburner	Spectrum, C64, CPC, ST	ACTIVISION
3	1	Operation Wolf	Spec, C64, CPC, ST, Amiga	OCEAN
4	5	Double Dragon	Spectrum, C64, ST, Amiga	MELBOURNE HOUSE
5	4	Thunder Blade	Spectrum, C64, CPC, ST, Amiga	US GOLD
6	14	R-Type	Spectrum, C64, CPC, ST	ELECTRIC DREAMS
7	9	Falcon	ST, Amiga	MIRRORSOFT
8	6	Batman	Spectrum, C64, CPC, ST, Amiga	OCEAN
9	10	Giants	Spec, C64, CPC	US GOLD
10	8	Last Ninja 2	Spectrum, C64, CPC	SYSTEM 3
11	12	Pacmania	Spec, C64, CPC, ST, Amiga, MSX	GRAND SLAM
12	RE	In Crowd	Spec, C64, CPC	OCEAN
13	11	Football Manager 2	Spectrum, C64, CPC, ST, Amiga, PC,	ADDICTIVE
14	20	Heroes of the Lance	Spectrum, C64, CPC, ST, Amiga	US GOLD
15	NE	Elevator Action	Spectrum, C64, CPC	QUICKSILVA
16	18	Four Soccer Simulators	Spec, C64, CPC	CODE MASTERS
17	13	Microprose Soccer	C64	MICROPROSE
18	RE	Supreme Challenge	Spectrum, C64, CPC	BEAU JOLLY
19	RE	Who Dares Wins 2	Spec, C64	ALTERNATIVE
20	15	Lombard RAC Rally	ST, Amiga, PC	MANDARIN

GAMES TOP TEN BUDGET

1	3	Joe Blade 2	Spectrum, C64, CPC, BBC, C16, Electron	PLAYERS
2	4	Commando	Spectrum, C64, CPC, BBC, C16, Electron	ENCORE
3	15	Ghostbusters	Spectrum, C64, CPC, Atari 8-bit	MASTERTRONIC
4	RE	International Rugby Simulator	Spectrum, C64, CPC	CODE MASTERS
5	RE	Knightmare	Spectrum, C64, CPC	MASTERTRONIC
6	1	Bomb Jack	Spectrum, C64, CPC, ST, C16	ENCORE
7	RE	Through the Trap Door	Spectrum, C64, CPC	ALTERNATIVE
8	NE	International Speedway	Spectrum, C64, CPC	FIREBIRD
9	2	ACE 2	Spectrum, C64, CPC	CASCADE
10	NE	Treasure Island Dizzy	Spectrum, CPC	CODE MASTERS

COMPILED BY GALLUP

NE – new entry
RE – re-entry

Amiga joy over Dungeon Master

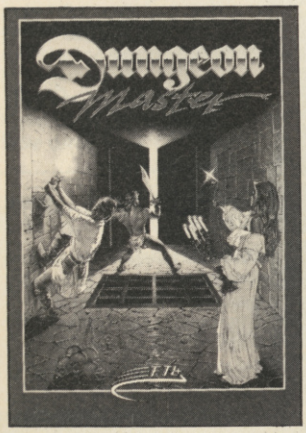
Amiga 500 owners disappointed at suggestions that the much-acclaimed *Dungeon Master* would never become available for their machines are in for a treat – they should after all be able to buy the game in a couple of months' time.

Dungeon Master is widely accepted to have become the best selling title on the ST. It was released on the Amiga a few weeks ago, but only for 1Mb machines, prompting consternation amongst A500 owners.

"We're in daily contact with FTL *(the American team behind Dungeon Master)* and we know that there's an Amiga 500 version that's almost there in terms of quality. They've found it a terrific challenge to get it down to the 500," said Mirrorsoft's managing director Peter Bilotta.

"We hope to have it on sale by the end of this quarter, but we'll only put it out when we're really happy with it." The apparent delay in the arrival of the A500 version has, it emerges, nothing to do with laziness as was suggested in last week's *Express*. As Bilotta explained, converting the program presented a considerable technical challenge due partly to the fact that the Amiga has less free RAM available than the ST.

To date, Mirrorsoft claims that *Dungeon Master* has sold over 40,000 on the ST since launch nine months ago, and a remarkable 10,000 on the 1 Mb Amiga. Most of the latter have sold into other European markets. *Dungeon Master* on the A500 will cost £24.99, the same as the current version.



• Dungeon Master: On Amiga 500 after all

In at the DTP end

Ten budding young newspaper barons have been presented with an Apple Macintosh DTP system worth £3,000.

The eleven year olds had won a competition for the best school newspaper, beating off 400 other entries. The competition had been organised by Apple UK in conjunction with the youngsters' publication *The Early Times*.

The kids – from Inglewood Junior School in Carlisle – won a Macintosh Plus, an Apple LaserWriter and Aldus *Pagemaker*. They have been trained to use the package already and will be producing the next issue of their *Four Esse Chronicle* with it – quite a step up from typewriters and photocopying!

Similar systems to those the children have won are used by many professional publications including *The Independent* and *New Computer Express*.

• Mac-ing the most of it

IT'S SO EASY!

Computer crooks rake in company money

Fraud is on the increase because computers are so easy to fiddle.

That's the finding of the London Business School and Saladin Security which conducted a survey of computerised companies. Their results suggested that no fewer than 17,000 businesses had been victims of computer fraud. The enquiry – headed up by Professor Michael Beesley – estimated the cost to British business at £400 million a year.

And Saladin Security's managing director Bruce Norris believes this is just the tip of the iceberg. He also says that outsiders hacking into computers make up only a small proportion of the micro crooks. Most cases are inside jobs.

"It's that much easier with a computer because figures can be moved around with so little effort. There's no crossing out of numbers to be done for a start," he told *Express*.

"Upper management, whilst not being computer illiterate, aren't aware of what can be done with them. They aren't keeping a close check on who is using the computer and for what.

"Companies are spending hundreds of thousands of pounds on preventing viruses and blocking hackers but they ignore access to the computers from people who work for them.

"Management are also failing to vet those people who use the computers".

Norris went on to claim that the vast majority of computer fraud cases don't go reported, particularly those which occur in banks and financial institutions.

"Would you bank with a firm if you knew they'd lost hundreds of thousands of pounds?"

Sugar puts faith in Ability

Amstrad is to continue bundling Migent's integrated business package *Ability* with its PC1512 and 1640 machines for at least another year.

A renewal deal was signed last week between the two firms. So far Amstrad has taken quantities of the software nominally worth £15 million – although it will have paid only a fraction of that for the privilege.

Some Amstrad watchers have already taken the renewal to signify a continued confidence by Amstrad in its low end PCs. Wild rumours have been flying around in recent months that Amstrad's boss Alan Sugar, was planning to phase out his low end models.

• Sugar: deal with Migent

Clickety clack Domark's back

***Smooth talking TV quiz veteran Bob Monkhouse is to appear in a new computer game,* Bob's Full House.**

The game is part of Domark's TV Games series which includes such unforgettables as* Bullseye, Countdown, Treasure Hunt *and* Blockbusters. *As one would expect* Bob's Full House *includes all the features of the bingo based TV show, though you won't walk off with any holidays.

POWER COMPUTING

The London Electricity Board last week became the world's first electricity distributor to install a computer system which will monitor the whole network – right down to the last cable.

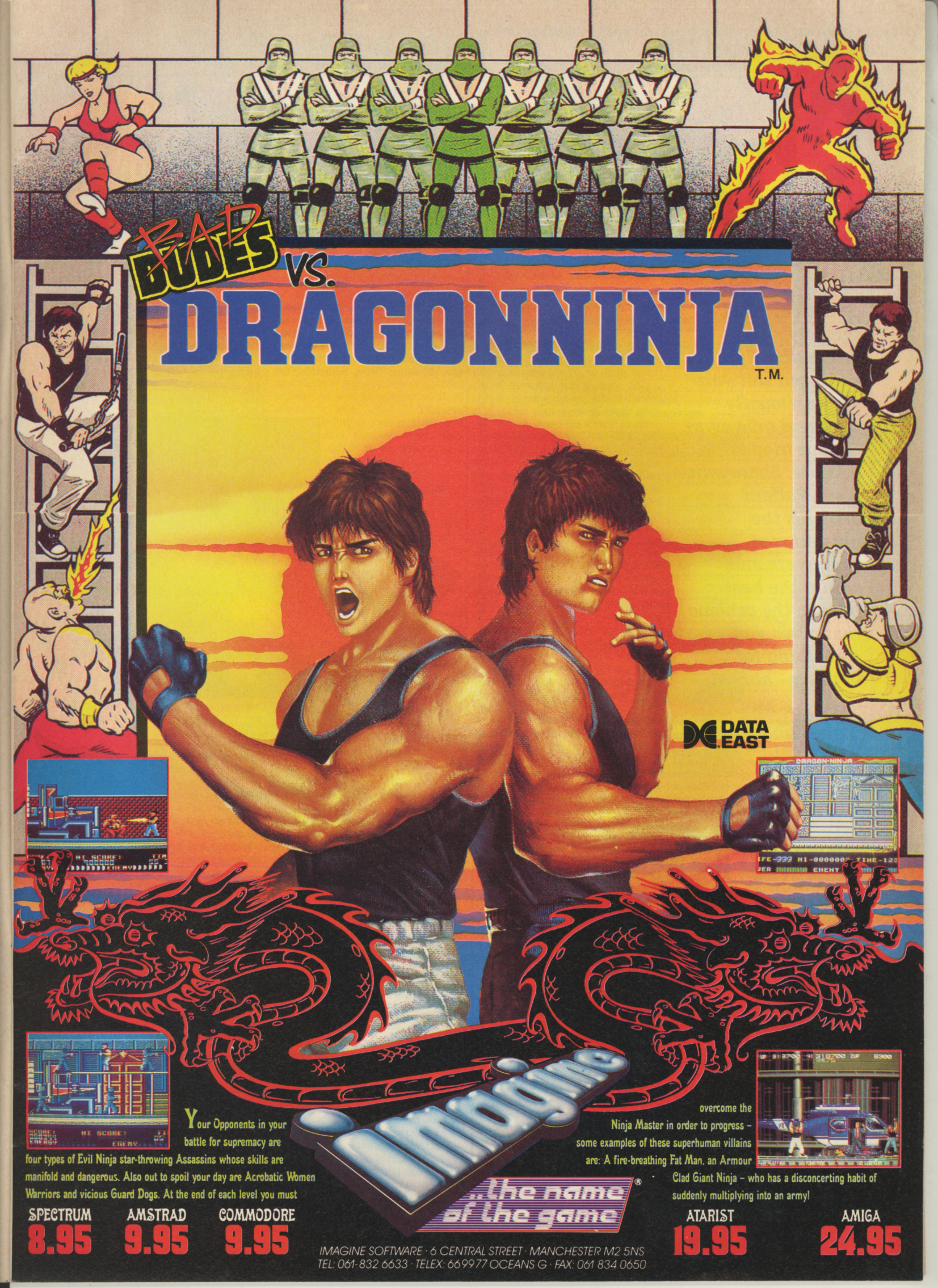
The board reckons the high speed system – costing £3.5 million – will be the fastest method of tracking down power cuts. The computers will replace old fashioned wall charts and diagrams.

A fish called Archie

Rainbird's weird adventure *Fish* goes on sale for the Archimedes this week. The game takes place inside a goldfish bowl and is priced at £25.

Meanwhile, Clares has launched its first title for the Archie – a £15 compilation called *Arcade 3*. It includes *Zarcon Invasion*, *Mazey Man* and *Bounce a Ball*.

BAD DUDES VS. DRAGONNINJA



Your Opponents in your battle for supremacy are four types of Evil Ninja star-throwing Assassins whose skills are manifold and dangerous. Also out to spoil your day are Acrobatic Women Warriors and vicious Guard Dogs. At the end of each level you must overcome the Ninja Master in order to progress – some examples of these superhuman villains are: A fire-breathing Fat Man, an Armour Clad Giant Ninja – who has a disconcerting habit of suddenly multiplying into an army!

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Share and share

Question: What is the only professionally produced software you can legally copy and give away to your friends? Answer: Shareware. Steve Patient explains the mysteries of shareware and names the best buys in the scheme that gives you something for nothing – almost

Do you actually need to buy software? Sometimes it seems that every pundit who ever put pen to paper has pointed out how the expense really starts when you've bought the machine of your dreams; there is still the software to buy. This was true in the days of bespoke software for mainframes but it certainly isn't any longer.

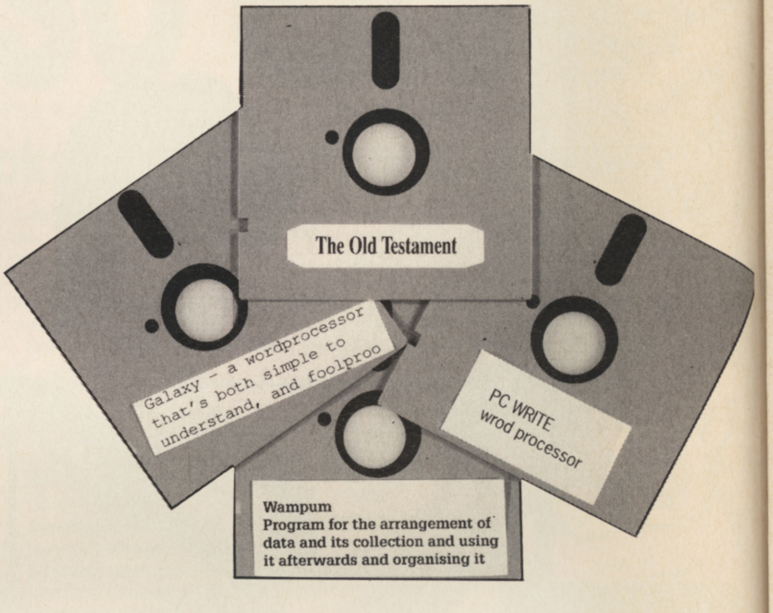
Some software is born great, some achieves greatness, and much is thrust upon us. There are many and varied reasons for software being placed in the public domain, thrust upon us as it were, only rarely is it because it isn't any good.

All programmers try to turn out a craftsmanlike product, but then what? Let's imagine you've written a piece of software that can not only sing and dance but play the bagpipes too. Is this any guarantee of money, fame, and riches?

It isn't. First of all the chances are that someone was there before you with a complete *Brigadoon* simulator, and possession is nine tenths of the law; secondly, marketing software is an expensive and fraught business and thirdly, you're a programmer; if you'd wanted to be in sales you'd have joined IBM.

At this point, since you'd at least like your skills to be recognised, you begin giving your software away to friends and acquaintances. If they think it any good the chances are that you'll put it into the public domain so that it can be tested against people's needs and the competition. If others choose to use it you know you didn't labour in vain.

In the USA, where all software written in universities is automatically public domain, PD software soon became a very large body of work with a widespread if informal distribution network via various SIGs (Special Interest Groups). Anyone can take a copy of a PD program and use it, abuse it or give it away. Being something for nothing PD software tended to rapidly reach the majority of computer users.


The Old Testament
Galaxy - a wordprocessor that's both simple to understand, and foolproo
PC WRITE wrod processor
Wampum
Program for the arrangement of data and its collection and using it afterwards and organising it

• **Try before you buy? Shareware lets you do just that**

When PD software grew big enough to represent an alternative distribution network programmers who might once have fought a losing battle against established commercial software realised it would allow them to outflank the legitimate software houses.

On the button

Reputedly the first PC shareware authors were Andrew Fluegelman and Jim Button (Buttonware) who began distributing their programs as shareware in America as far back as 1982. Greeted with amazed ridicule by the big software houses – most of whom had been spending a fortune on copy protection schemes – this 'free' software went down big with PC users, it remains largely a PC phenomenon.

The distinction between shareware and PD is subtle but important. Unlike public domain software Shareware remains the property of the author and legally you have to buy a licence to use it in exactly the same way as you would with *Autocad, dBase IV* or *Lotus 1-2-3*. There are two other important distinctions between shareware and PD; shareware is almost all American in origin and therefore almost all of it is written for IBM PC clones.

What makes a shareware package different from other commercial packages is that you can have a copy for nothing and try it out for as long as you wish to see if you like it. This was the revolutionary part of the idea. Compare this to more conventionally marketed software (ring up Wordperfect Corporation and ask it to let you have a copy of *Wordperfect V* on a trial basis. See what it says; it will only be two words).

An early convert to the idea of shareware was Bob Wallace, reputedly now a multi millionaire on the strength of *PC-Write*. Others weren't slow getting in on the act once it became obvious that it worked. The success of *PC-Write* prompted a host of imitators: if there was a chance of making some money from your labours by putting in exactly the same effort as was required to give the software away, why not have a go? A lot of people began to distribute their programs as shareware rather than giving it to the public domain.

You want it – we've got it

Word processing is still the commonest use for a PC, and likely to remain so. Reflecting this fact there are several excellent word processors available and all of them tend to be crammed with features. *PC Write* suffers so much from featuritus that it isn't worth learning unless you have a lot for it to do. If you just need to write the occasional letter, go for an easier one like *Galaxy*.

As far as spreadsheets are concerned *As-Easy-As* seems to have become the *de facto* standard and is as good as most commercially available offerings (that means it's a *Lotus* clone). But if you insist on using the real *Lotus* then there are plenty of utilities as well to make your life more meaningful.

There are more shareware databases than you can wave three megabytes of data at including a free form pop-up database (really) called Instant *Recall* and a *dBase III* clone called *Wampum*. Probably the best known (and just about the easiest to use) shareware database is *PC-file+* from Buttonware.

The C language is supported mainly by libraries (who can compete with Zortech anyway?) but there are various goodies for assembler freaks. There is at least one complete *Modula 2* compiler that supports the 'huge' memory model (all of memory) and boasts an integrated editor.

There are a lot of graphic packages. One to look for is *Finger Paint*; it supports CGA, EGA and Hercules screens, and uses a mouse or the keyboard.

What else? You want complex maths packages? Take a look at *Matrix Laboratory*. Religion? Try the *Old Testament* on six disks, and the *New Testament* on four. Music composition? Compose on staves and print it out with *Composer*.

And there's more: Astronomy, Ham radio, Educational, at least twelve million DOS utilities and that hasn't begun to mention business accounting systems.

alike

Wot, me register?

There are benefits to be gained from registration. Some software is not completely usable in the distributed form, all the features may not be implemented or explained in the disk documentation. Registration will usually bring a manual and the latest version of the program.

Telephone support is usually available direct from the author. Many authors also pay for persuading others to register. If it's a good product, register, and earn your money back simply by recommending it to all your friends. There isn't much point in appealing to your better nature and commenting on the warm feeling that comes from knowing you are an honest citizen, so they don't.

Publish and be damned

As in any new market enthusiasm sometimes outran ability and a lot of programs which weren't really up to the job were offered as shareware. If these had been marketed traditionally, sheer market forces (the amount spent on advertising and committed to working with the product) might have kept them going. This process has in the past resulted in far too many unhappy customers.

Not so in the shareware market. There are no unhappy customers because no one becomes a customer unless they already like the product. No one is going to send off money for a product they don't intend to continue using. Bad shareware simply fades away.

All right, you've got your copy of *PC-Write* from your friend and have decided that you like it and want to register – ie buy a licence to use it. In the USA this is a matter of sending off your $49 or whatever and waiting for the latest version, your licence and the manual to fall through the letterbox. Couldn't be simpler.

In Britain the situation proved more complex; for a start the Brits appear to be less honest than the Americans and few people using shareware here bothered to register. Those who did want to register hit other problems: the cost of dollars; the reluctance of some American authors to bear the cost of sending manuals abroad; and the complete impracticability of taking advantage of telephone support when that support comes in at pounds per minute during office hours.

Disposable income

Sending money to the USA seems a bit like sending coals to Newcastle but if you do it's going to cost £5 on top of the registration fee. You can buy a dollar cheque from the Girobank even if you don't have an account with them for sending to America.

Barclays Bank does an International Money Order for the same price but offers a faster service. Everywhere else we tried wanted more.

The good the bad and the dirty

Anyone who ever ripped off an office copy of *WordStar* for a friend knows the constant whingeing they earn as a result. 'How do I save a block – change the page length – print in bold – set the margins' etc ad nauseam.

With shareware there isn't even anyone to whinge at. The disks usually include demos and enough information to get you started, but not to make full use of the program. What use is a crippled piece of software? And make no mistake, without a manual most complex software is unusable. It pays to register.

Where to get it

- **The cheapest way of all is to get it from a friend.**
- **Download it from almost any Bulletin Board**
- **Computer clubs and PC user groups**
- **Advantage Tel 0242 224340**
- **Shareware Marketing Tel 0732 771344**

A few Americans, unimpressed with the moral level of citizenship here, took their products out of the shareware category and sold distribution rights to legitimate companies in the hope of getting something out of the old country. No version of *PC-Write* above 2.4 can be freely distributed for example. This trend is becoming more common with only earlier versions of some programs remaining freely available as tasters for the full-featured bug-fixed latest version.

What sort of thing can you find in among the shareware? There is very little dross. Programmers have learnt just how good their software has to be to succeed in wide open competition. In fact much of the software is as good as or better than commercial offerings. Has to be since its only advert is word of mouth via satisfied customers. ●

3½

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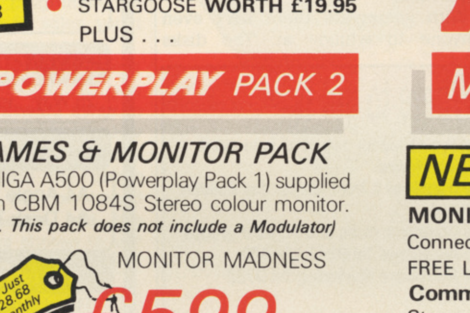

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Dear Reader

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PS. Sorry, NO personal replies, whether you include an SAE or not. We're too busy putting Express together!

MEANING OF LIFE

Please could you send me a few tips on how you would get extra lives and things like that for the Atari ST.
Joseph Campbell, Galway

● ***Er, well, it's kind of a difficult question to answer in general, so the best advice I can give you is:***

a) Become a cat; or
b) Take up Buddhism; or even
c) Read our ST column to find pokes for individual games.

DO YOU LIKE SPIFFING

In the ST column, Mike Gerrard talked about PD software. Perhaps he would like to pass on the fact that "Spiffing Good Public Domain " charge only £2 for both single and double sided disks, and can be reached at Spiffing Good Public Domain, 29 Trinity Street, Bishop's Startford, Herts.

Oh yes, before I go, are there any Galaga clones or even Galaga itself available for the ST?
Mark Thomas

● ***We don't know of any Galaga clones for the ST, but we'll certainly pass on to Mike the fact that Spiffing only charge £2 for disks and can be reached at 29, Trinity St, Bichop's Stortford, Herts, and that'll save us mentioning it here.***

WITH ONE BOUND

I'm still chuckling about the "L Bound" punny, sorry funny letter, and your reply in Express Mail Issue 11 January 21st.

It gives better and more pointed guidance to aspiring writers on ways to get printed, than some computer mags with whole columns of 'Advice to Writers' - ethics apart, that is.

Maybe if you rewarded contributors as well as your rival quoted, you might have got it first, and the free advertisement in their pages instead.
Evan Scent (really C E Beach,Ormskirk)

● ***Yes, though he ended up looking a prat, whether you consider ethics or not, which you have to anyway. Murdering someone is an even better way of getting your name in print though I wouldn't advise it. Free advertising? Naah, we don't need it!***

If we were giving advice to aspiring writers on how to get their letters published in Express, which of course we're not, we'd say:

a) keep 'em short
b) keep 'em lively and to the point
c) ones that make us laugh (though not always for the right reasons) are sure to get in
d) it helps if we can actually read them
e) full stops are really jolly useful things. Like here.

Evan's letter scores on all those points.

MSXTREMELY HARD TO THINK OF ANOTHER PUN

We are pleased to say that we can help your correspondent C P Kowalski who is having trouble with the MSX game "Elidon". Having recently completed this fascinating game ourselves after many hours of work, we can certainly understood his disappointment at not being able to find the final potion after so much effort.

However, the answer is simple: the seventh potion does, in fact, exist - in the bottom right hand corner of the maze. It is reached by using the pipes to break through the wire into the top right hand section, but instead of going up for the potion at the top, find your way easily to a path on the far right of the maze which leads straight down to the elusive potion.
Jemima and Michael Winder, Birmingham

● ***What sort of potion is it? Ain't it heavy, does it make your dog do the wallpapering, do surfers crash out through your monitor into your living room when you open it?***

I'M NOT SURE IF I'M BEING INDECISIVE

I would like to purchase an Amiga very much, but I am in two minds to do so. You see, there does not seem to be a local shop that deals with the Amiga, and I'm worried about the backing if I were to buy. I would like to program some graphics and the Amiga seems to be the ideal computer for me.

I am a beginner. I therefore feel that I may have to decide upon an Atari ST instead, as this computer seems to have a lot of backing in my area. Do you think that this is wise or not? As I have read all but one of the Computer Express I would value your opinion greatly.
Will Chin, Plymouth

● ***Both machines are equally well supported and both are pretty reliable so I don't think you need worry one way or the other there. The ST vs. Amiga debate has raged and will rage for ages; you could read the correspondence about it but I doubt if if will help you one way or the other!***

In a nutshell, the Amiga has a sound chip almost as good as a synthesiser in it so has great sound for games, even if everything sounds like it was written by Jean Michel Jarre; the ST's sound chip is nowhere near as good but it has a built in MIDI port and so is better for 'serious' musicians. The Amiga has better graphics but a disc operating system that is undeniably slow.

For graphics or games, I'd prefer an Amiga; music or just 'computering', I'd go for the ST. But both are very good machines and you can't go far wrong with either.

IN THE EVENT

On 2nd December 1988, I sent a cheque for £4.90 to "The Main Event" (TME) for two items of software. Then, like others I sat back and waited.

A couple of days before Christmas I rang TME to find out if the order had been processed. The answer was "We're out of stock of those items at the moment, but the cheque won't be cashed until the goods are in."

Come the new year, I checked the bank again, but the cheque still hadn't been cashed. From about the 7th January to the 19th, I rang TME but the phone was either engaged, unobtainable or faulty! Back to the bank: still no record of a cashed cheque.

INCONSOLABLE?

It was with great interest that I read the 'hands on' review of the new Sega 16 bit console. Your review though did seem a little over optimistic about the role the console will play once it reaches the shores of this country.

A few major factors have been neglected. The first is that cartridges cost a lot more than present 16 bit titles and there are a great deal more 16 bit titles than there are ever likely to be cartridges. Of course there will never be any PD cartridges.

In a market where one of the reasons why the 8 bitters are still big sellers due to their price advatnage, the price of software that runs on them, and the sheer quantity of the software, I can't see consoles having much if any impact.

Another factor is what may be referred to as the 'computer' factor. I suppose it would take a professionally taken poll to support or to prove wrong my belief that parents like buying their children something which has the potential of being creative. Whether the micro they purchase is ever used (or likely to be used) for programming, education, or any sort of productive activity is beside the point.

There is a possibility (hinted by yourselves) that they may actually create a new market. The Konix console may overcome the cartridge problem, if as rumoured it does include a three inch disc drive.

Consoles are unprogrammable and therefore do not encourage any sort of 'home grown' programming whatsoever. Doesn't this imply that there is a conspiracy – perhaps the word is a little excessive – to move the writing of games away from the smaller software houses to the larger software houses who can afford development machines, site licenses and so on?

There is a great deal of talk about the development of consoles based on the ST and the Amiga, but how on earth are the respective companies going to convince software houses to put their titles on cartridges, if required, and make them independent of the keyboard? Bear in mind that the amount of software that doesn't work across versions of TOS and Kickstart at present.

I suppose having made a heavy investment in micros, I am inherently biased against the whole idea of consoles, but I do think that the few points I've raised are worth taking seriously.
Ahmad Alam, Toxteth, Liverpool

Mystery WINNER prize

● ***Well, that's what they said about word processors when Amstrad released the PCW, and that's sold a million. But this was no great Alan Sugar vision; he'd been to Japan and seen the popularity of 'dedicated' word processing computers there.***

In Japan now consoles are in virtually every household with kids in the country, permanently resting on the straw mat by the TV. The console market seems totally independent of the micro market, which is also strong, but the console/ micro split accurately reflects the games/ serious software split.So, are we due for a significant re-shaping of the market in 1989? Only time will tell, but if Konix's baby delivers what it promises, I think we could be.

Alien Syndrome
SEGA

• Are consoles the shape of gaming to come in the nineties?

If TME had gone out of business, I had only lost £4.90, but if I'd stopped the cheque that would have cost £3 in charges, so staying optimistic I rang Castle Computers who are also in Stoke-on-Trent. They said they didn't have the software titles I wanted, and that TME had been 'raided' by Trading Standards Officers who hadn't found any software in stock!

Next step, ring Trading Standards. Yes, they had 'raided' and taken away a sack of cheques and orders but my cheque wasn't on their list.

Trading Standards thought TME was a case of someone overstretching themselves, not a plain fraud. After all, if TME had wanted to make off with the money, the cheque could have been cashed long ago.

Again in the view of Trading Standards, the crash was brought about when some people rang them with possibly genuine cause for complaint. There then followed the article on TME in the big Christmas edition of Computer Express (which by the way I haven't seen). When this article was read by the trade, suppliers pulled the plug. End of business.

Was TME a scam? I don't think so. The most that can be said is that it was badly organised, after all no one cashed my cheque. Perhaps other readers have a different story.

A W Crease, Stevenage

● ***This is not the only letter we've had about TME. They are assuring us that they are still in business, despite interest from the Police, Trading Standards Officers and magazines who have stopped taking advertisements due to unpaid bills.***

LEAVE ME A LOAN

After reading a news article in issue 11 of your magazine, concerning student loans becoming available for the Amiga 500, I rushed down to my local NUS shop to order one.

The manager, not knowing too much about it, telephoned the NUS. He then told me that the Amiga 500 will not be available through the loan scheme. The reason for this was that it is 'not PC compatible' and was considered to be a games machine by the NUS or the Midland Bank (or maybe both, don't really know).

I would be very grateful if you could tell me whether the Amiga 500 will be available through the scheme. I want the

• **Will the next Student Games be held on computers? (see *Leave me a loan*)**

HYPOCRITIC OATH

First of all, I would like to congratulate you on your magazine. A breath of fresh air among all the othere (excluding ACE, of course). Now for my comments. Some fuel for the hacking/cracking debate. Until recently, I was a friend of a person who wrote many of the complex Spectrum loading routines. It turned out that he, now a Commodore owner (not the reason for our discontinued friendship), was a gifted programmer with a very good understanding of Z80 machine code. He was also fairly fluent in 6502, and had turned his attention towards hacking, cracking and piracy.

Hacking, in the sense that he delighted in finding other people's Prestel codes; cracking in the same way as your Mr X, keeping the copies to brag about the number that he has, rarely actually playing them.

I cannot say that I condone piracy, or that would make me a hypocrite (but then you have to be a hypocrite to be British!) because I myself have many copied games for my Spectrum. This is because, until recently, I could not afford to buy the original as I was a YTS trainee.

Now I am employed, I can buy more or less any game I wish, but because many of the copies that I have are no longer available in the shops I am keeping them for my own use. I do not supply others with copies unless in return for a favour such as them having copied games for me. I do not copy games that I do not like. Pirates are not killing the software industry, sharks are – sharks which produce unadulterated rubbish such as the Spectrum version of Salamander. Even on the +3 the sound was no more than bleeps, and it was excruciatingly slow. Fifteen quid for this? My old ZX81 Scramble game was better than this!

Just a note to programmers: when you convert a Commodore game on to a Spectrum, please remember that the Spectrum can handle better detail than you use it for. I get fed up of seeing blocky messes on my Spectrum instead of nicely drawn graphics.

Darren Robinson, Brampton

● ***If it's sharks producing dodgy games all I can say is it's better than eating people and starring in crummy old films. Perhaps Viz comic's sharks will be wanting to play games on their Speccies next instead of biting swimmers' legs? off?***

IMMORAL TRADITION

It escapes me why people ramble about the petty ifs and buts and general morality of buying pirate software. 98% of people who encourage piracy do so because the originals are way beyond their price range. The cost is the real issue. After struggling to get £300 – £400 together for your computer you are then expected to pay £12 – £25 for a 75p disk with a mass produced programme copied onto it.

The obvious thing it seems is to cut the bull and explain that the truth is that Software Houses like to retain a nice incoming cash flow. I would like nothing but originals. As it stands I'll have to stick to buying top games for the same price (or less) as PD software. I would gladly pay a few quid more for packages and manuals etc.

H Wright, Lincoln

● ***Yes, but all this self-righteous nonsense about software houses putting the prices too high doesn't justify your stealing software, which is what you are doing. If writing and selling software was your sole source of income and people were ripping off your stuff, your perspectives would be rather different.***

And as for this 'I've payed for a computer so I'm not going to pay for software', well that's just plain silly. You may as well say you've payed £2,000 for your car so you're going to nick petrol rather than pay £2 a gallon.

Come on, computers aren't a necessity for most of us, you knew the price of games before you bought your machine, and to pretend that you're somehow forced into nicking games, and therefore morally justified, because you can't afford them is just daft.

Why not just be honest? Surely it's for the same reason that we've all taped our mates' new LPs. You do it not because you couldn't afford to buy a legit copy, but because it saves you money to spend on other things, and you know you can get away with it.

WOBBLY DONGLY BITS

Thanks to Mr Bound (letters, Express 11) for my best laugh of the week – almost as good as Mr Doddy's chain letter about pirate software which still seems to pop up from time to time in the less observant monthlies.

Junk mail seems to have gone full circle, now emanating from the consumer on whom it has traditionally been inflicted – computers have a lot to answer for. (I promise that this is the only version of this letter being submitted for publication).

In a more serious vein I'd like to comment on the stupidity of various anti-piracy measures I have encountered. Since Christmas, my collection of ST games doubled (I now have four) and frankly I have come to wish I hadn't bothered.

Super Hang-On impressed me. It features a start-up disk with a minimal amount of code (loading screen, music and custom loading system). The programme disk appears to feature a deliberately damaged disk surface that only the custom loading system will(sometimes) read.

The problem occurs when my computer warms up, presumably the head amp gain drifts and my year old internal disk drive doesn't want to know about wacky disk formats. The disk drive still reads the start-up disk and even the idiot message on disk 2.

Leaderboard 'Birdie' Golf is even better: it's dongled. As the packaging cleverly omits to mention this, it was quite a surprise when a sawn-off joystick plug dropped out of the box and even more of a miracle that it remained in the box in the first place. So to play the game (sorry – *use the simulation*) I had to switch off the computer, unplug a number of connecting cables, turn the computer upside down and insert the dongle into the joystick port – great. Deciding this was not a good idea, I then spent the next couple of hours making an extension lead for the joystick port. I could easily have run off half a dozen dongles while I was at it.

In conclusion, a nine pin D-connector with a couple of connections made is not a security key, just a stupid waste of money that gives me hassle and protection systems which make loading more difficult and add unnecessary pirates. I shall not buy such software in the future and feel that your magazine could be of some service to the consumer by highlighting the use of such irksome protection methods in your reviews.

Jim Feltham, Morden

● ***It seems what you're objecting to is not copy protection, but bad copy protection – and a lot of frustrated users will be nodding in agreement and thinking of their own favourite stories of ridiculous protection routines.***

The accounts program used in one of my previous (and more legitimate) jobs demanded to know what password you wanted to use from then on when you first started it up. Unfortunately the first, ham-fisted, user wasn't allowed by the program to edit his mistakes, and once the password was typed in, it couldn't be changed. We spent a year typing in the password* PASSWRODO000^Csodit. *Which was, I suppose, effective in that it would certainly be difficult to guess.

NON-STANDARD BEARER

I have the solution to both the software piracy and the profiteering problems: buy an old or non-standard machine.

True, my dull old Beeb, sluggish Spectrum and miserly Vic 20 are not 'Top of the Range' models but, by sharing £30 between them at the beginning of every new term (when my grant arrives), I'm gradually building up a software collection which is varied, educational and even useful.

Of course, it has lead to other problems, like finding a supplier of hardware and software for my very individualistic Atari 800. But then, who wants the best of all worlds?

Kathleen McHale, Normanton

● ***And how about avoiding the moral dilemma of whether or not to tape your mates' LPs by buying a wind-up gramophone? Sorry, only joking. BBCs and Speccies are great. In fact wind-up gramophones are quite good too. Amazing the quality they could get then even though they had to record everything in a chip shop.***

Amiga for basic wordprocessing and for learning to program in C. I don't see why I should buy a 'professional' computer with a lot of business software which I have no use for, when I could buy a computer which will be used both for my studies and for entertainment.
R W Norris, Leeds

● ***Commodore and the NUS assure us that all Amigas will be available through the scheme, so it looks like you were just a bit early. Whoever it was who dismissed the Amiga as 'a games machine' should be made to write out six million times 'I must realise that the line between serious machines and games machines is getting increasingly blurred'.***

LOOKING AT IT ANOTHER WAY...

After reading Rik Hayne's rare review of "Dragon's Lair" I immediately bought a copy from my local computer store.

I have come across an oddity with the game and wonder if Rik had also. Sometimes, on different loadings, some screens are displayed reversed. For example, my copy will show screen one as illustrated on page 28 of this week's Express, but then on another loading the picture is completely reversed, ie. the bridge is viewed from the left. I haven't got very far into the game yet, but this reversal of the screens has occurred on at least three occasions so far. I have never experienced this effect before.
David Powell, Lancing

● ***Yes, this reversal of screens is an intentional feature of the game to add variety to the graphics without needing yet more disks (there are six as it is).***

The technique was first used by Van Gogh when painting his famous 'Man with Earache'; the image, done in a mirror, shows the right ear bandaged when it was the left one that was actually cut off.

• **Do you need a mirror to play Dragon's Lair? (see *Looking at it another way*)**

OLD AGE COMMS...

I would like to subscribe to Microlink, but I am only 14. Will I be able to join?
Mark Smith, Horley

● ***I'm afraid not. Subscribers to Microlink (and other such services, it appears) must be 18 years of age or over. The reasons seem to be financial: such services ask you to pay by direct debit which is out of the question for anyone under 18.***

For the time being you'll have to be content with going into pubs, consuming alcohol with a meal if accompanied by your parents, and so on. In just two years you can get married with your parents' consent and do certain other things legally, as well as driving a moped, tractor or mowing machine. At 17 you can drive a car or small steamroller. Then, at last, at 18 you can buy alcohol, vote, drive an HGV... and subscribe to Microlink.

MORON MISSIONARY

I would like to reply to Alan Boswell's letter in *Express* 11 where he described most computer games as 'basic moron fodder'.

I only wish I could view the world through your righteous eyes. People buy what they want. If you're not happy with it, tough. You're a minority.

I too despair at the lack of strategy games and simulations, but I manage to get by.

As for your comment on narcotics, I suggest you keep your mouth shut when you obviously don't know what you're talking about. Do you smoke at all? Perhaps you like the occasional glass of beer or wine? A cup of tea – think of the caffeine!

You made a good point but such a bigoted approach only serves to promote yourself as the moron.

Anyway, thanks for the mag, truly remarkable. After computing for six years, this is *the* most interesting publication to date.

P.S. How about a ZX80 column?
Tony Stubbings, Croydon, Surrey

● ***Must admit, I can't see how narcotics compare to computer games either. Apart from the fact that they both leave you bleary-eyed, penniless and ashamed to admit your habit in front of other people.***

GROUP MSX

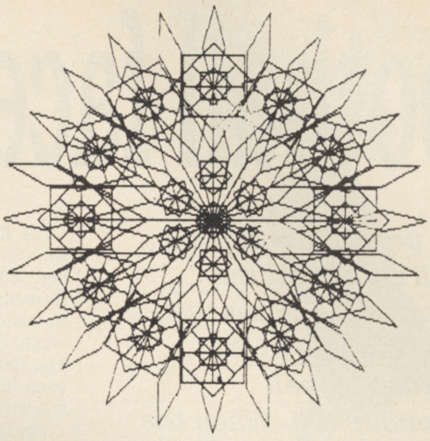
There have been several recent stories in the computer press about user groups folding.

It's a fact that people do start user groups just to get free software from software houses and loads of money from members to buy their own super duper toys. This in not on!

MSX Link started way back in February 1986 with five members, and we have now got members in most parts of the world. We are still printing our monthly magazine for MSX-ers and yes we have just installed a modem, but I bet it was cheaper than the setups of some other groups. It is well known that apart from the MSX which is cheap (about £70) most other computer users have to spend over £300 to get on line.

I feel that people who use any other computer than MSX should think very hard before joining user groups unless you know you will get a mag for your money.
David Webb, Spalding

● ***This is rather a cynical view of the motives people have for setting up user groups. Maybe there is the odd dodgy setup here and there but in my experience the vast majority of groups are run by enthusiasts who want to share their enthusiasm for their machine with others.***



• **Logo: Language of the future? Or just a dull game with bad graphics? (see When I was a lad)**

User groups are not run by professionals, they're amateur concerns in the true sense of the word. Cash flow problems are bound to be an occasional consequence of this – the same sort of problems that beset any small club or society.

It seems to me that in the case you're referring to, the PCW User's Group, the downfall was caused not by extravagance or bad management but by a simple fall-off in interest in the non-LocoScript side of the machine.

WHEN I WAS A LAD...

Having been drawn back to the pleasures of computing after a three year break, I have made a number of observations. I would put it to you that much of the earlier charm of home computing is slipping away, just as ever complicated graphics accompanied by orchestral perfection becomes the norm. It seems to me that the job of the programmer is now slightly more difficult than that of the air traffic controller, and therein lies the problem.

Like many others I enjoyed, and still enjoy, playing many computer games, which became a stimulus for me to try to write programs of my own. I remember at one time, waiting the arbitrary three to four months for a – by post only – Spectrum.

After the ZX81 (remember that?) this machine taught me to write Basic and later machine-code programs, which not only gave me great pleasure but also looked half decent, when compared with the professional software of the time. The task was not too daunting as early Spectrum and ZX81 software was not that much better than my own. Satisfaction was thus great.

As a trainee Junior School teacher I see it as sad that for many children/young teenagers, using the computer for anything other than games is now just too much of a challenge, and rather boring.

Would it not be possible for magazines such as yours to encourage the next generation of potential programmers, with information on drawing pictures from LOGO, for example? Not only are there many educational reasons for doing this (promote consideration of scale, angle, the make-up of shapes, the use of mental arithmetic, the structure of a program, mathematical relationships etc etc), it is also great fun and free!

With the value of computers being recognised in the National Curriculum (computers as word processors has rightly got the use of computers mentioned, even in the English Language document) it seems a shame to me that many of the benefits and pleasures of having a home computer are now being lost.
David Channon, Teignmouth

● ***The problem with promoting computers as an educational tool in a magazine such as this, is that however earnest the writer's attempts are to make the subject of LOGO sound interesting, the results tend to have the same sort of excitement and stimulus for learning as the Shipping Forecast.***

There are two types of LOGO article. One, the worst, reads like a bad manual ('On-screen graphics are drawn by means of a turtle-shaped cursor which, by means of a number of commands, the user can easily move round the screen...'). The second, even worse, type sounds like Play School ('Now look at this routine. Can you guess what shape this will produce? Let's see, shall we? Yes, a tree! Were you right? Now let's all pretend to be a tree...').

Either approach is a complete turn-off to most of us. Yes, it would be nice for us to have the same ideals as the BBC, viz. to inform, entertain, and educate as well; unfortunately it's difficult to write in a lively fashion and educate at the same time.

A look at the educational software around illustrates the problems. With a few honourable exceptions (such as the Virgin Laser Disk game reviewed two weeks ago) a lot of it is dull, badly-written, dull, pedagogically dubious anyway and dull. There's no money in educational software – can you see a Maths package hitting No. 1 in the software charts? – and so most of the programs tend to be homespun affairs, produced for a small market, and therefore expensive. And dull.

Yes, it is a shame that computers are treated as toys and their potential for educational development is ignored, but I have a sneaking suspicion that's as much to do with misunderstanding of their potential by Education Authorities, dull software, overworked teachers and a lack of good technical writers as it is to do with kids' mental laziness.

Football faces the computer age

As the press huffs and the football clubs puff the Government is closer than ever to bringing in the notorious Football Membership Bill. When the Act is signed all teams will all be kitted out with the latest in computer technology. In theory this will show the red card to the hooligans and have them away from the terraces for good. But will it? Colin Campbell looks at the implications...

The computer as a revolutionary tool which makes life easier is a familiar model. But the perverse effect it often has of complicating life needlessly and expensively tends to be diplomatically ignored.

This though is the situation our football clubs are reluctantly facing up to. The Football Membership Bill, due to be passed this summer, will grab even the humblest football club by the most sensitive parts, Vinny Jones-like, and kick it into the computer age. Inevitably there will be injuries.

• Compulsory ID cards: Will the fans suffer?

Via the controversial and, at least in soccer circles, despised Football Supporters Bill all fans will be required to carry an ID card in order to attend matches. Personal details will then be held on computers in the grounds and on a central mainframe in London. The cost of this alone will make Maradona's transfer fee look feeble.

The football clubs are waiting in utter fear for the Government's recommendations, which could just ask for a simple "flash your card at the turnstiles" system. On the other hand they might be more keen on cashpoint or smart cards which would be slid through magnetic or optical readers. The difficulties that would cause must frighten even multi million pound mass entertainment concerns such as Liverpool FC.

The football clubs argue that their gates will fall, that fans will suffer and that those people who live near grounds will receive no benefit. After all, ten thousand impatient people milling around outside the front door doesn't make for a relaxing Saturday afternoon. It's hard to believe that unruly queues will not form.

The idea is to keep the nutjobs off the terraces. But when the good and honest soccer fans are finally in the ground the only punters left outside are the ones too violent to be allowed into a football stadium. Put up your shutters.

In the great match between Her Majesty's Government and the football clubs the latter are currently about four nil down with a minute to go and a whistle happy referee. It will take a miracle to change this Government's chosen course. Football's a funny old game – but not that funny.

Obvious social difficulties are being put aside by the Government which points out that a computerised database of millions of people (many of whom fit into a neat social group) is worth having. Such information could be sold off hither and thither to companies willing to switch on the computer which spills out all manner of what is commonly known as junk mail. The cards – whatever shape they take – could also feature advertising on them.

Such is the value of this information that large companies such as Aquix Holdings and GEC have already offered to kit out the football league with millions of pounds' worth of hardware – if not completely free of charge then at least with a huge initial investment of their own. They might then have the rights to all the info. It seems that despite the cost the football authorities would rather have financial control of all those names themselves. ●

Protection racket

Sports minister Colin Moynihan has promised that the information held will be subject to the Data Protection Act. In effect this means that if you are in the computer you have every right to see what information they hold. The Government promises that it will be restricted to essentials such as name, address, football club, and date of birth. Criminal records will not be included.

• Moynihan wants legislation and computerisation

The police will have access to the main computer but football clubs will not. If a fan is barred from football matches the club computer will be told. But the central mainframe will not divulge the reasons why. Other rights are still being hashed through. It is yet to be decided whether or not members will be able to opt out of the junk mail threat by ticking a box on the entry form.

Pondering options

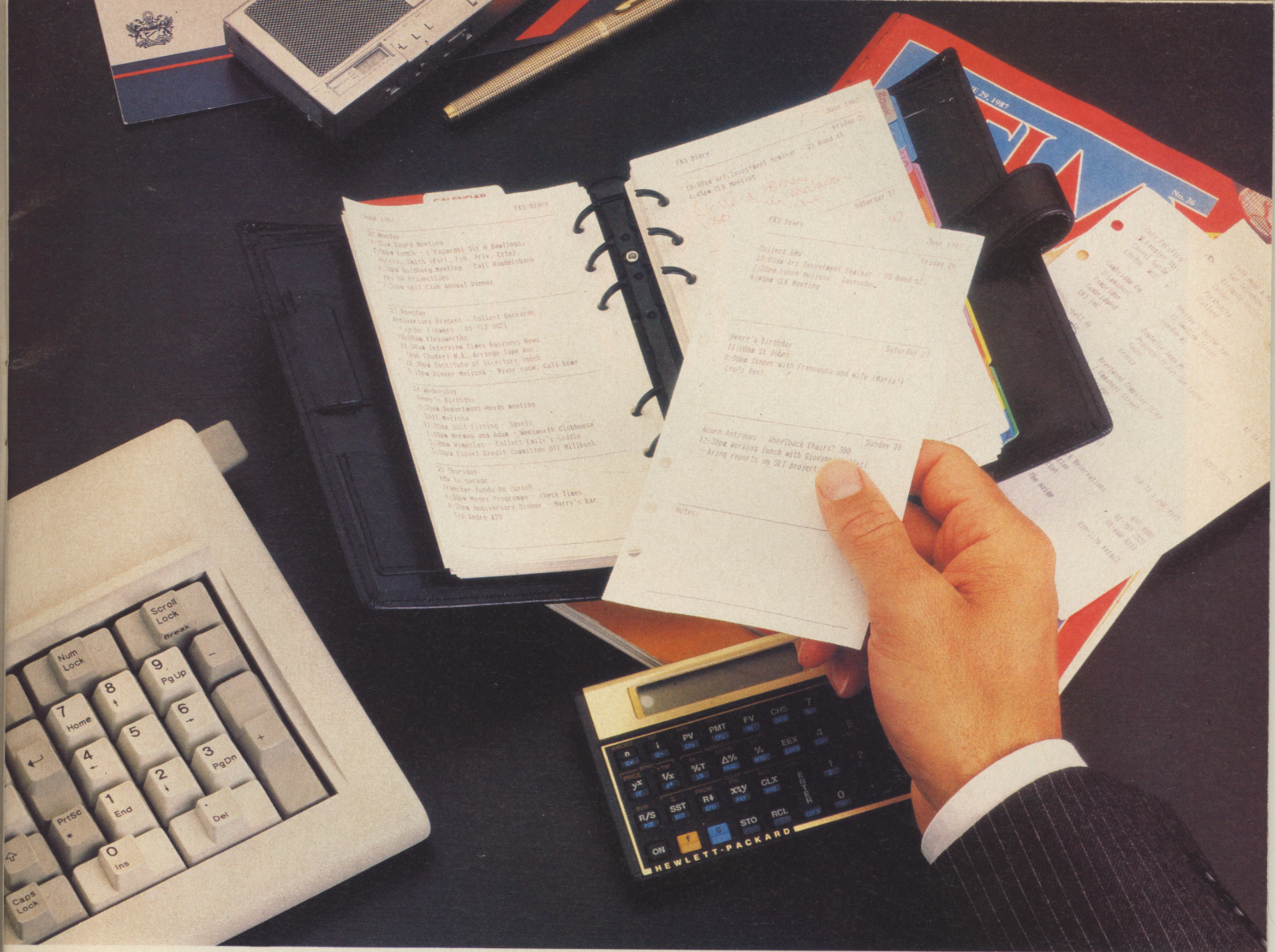
Enormous electronics firm GEC has put forward a tentative offer to the football authorities already. It claims that its system is tight on security, reliable and, most important, quick and efficient. The matter of cost is not being discussed at this point. According to GEC Avary's deputy managing director Tony Kirkman each fan will take 0.1 of a second to go through the ID check. He compares that to three seconds for rival systems.

Essentially the GEC offer comprises of smart card technology. "It means that all the necessary data will be kept on the card," he explained. "In effect it is a tiny portable computer.

"The great advantage of this from the football authorities' point of view is speed. The card and the receiver both have an in built aerial so no contact is needed. A supporter can just hold the card up and it is read. They can hold it any way round or upside down. The main objectors have said that there will be delays. But the smart card cancels that out."

He also claimed that the cards would be almost impossible to forge and that breakdowns at any turnstile would not affect other turnstiles in the ground.

After installing all of this GEC will maintain the system and run it. In return it will charge something like £3 a year to each supporter. There will also be negotiations for the database details. It's clear that major concerns such as GEC are well aware of the financial possibilities.



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While the IBM PC may have had something of a schizophrenic history – a classic split personality as the standard business computer became a successful home computer – the Amiga can beat that. Commodore's machine has undergone at least four distinct personality changes.

Its designers wanted the Amiga to be the ultimate games computer and the hardware was streamlined to that purpose. After it acquired this unborn dream machine Commodore decided it had to be the ultimate business computer, and saddled it with a dog of an operating system and a price to match.

When the business buyers of the western world failed to flock to the newcomer Commodore switched tack, promoting the Amiga as the ultimate professional graphics tool.

Finally, in response to overwhelming public demand, the A500 was launched. Initially overpriced, the newest incarnation of the Amiga is now at an acceptable £399 and enjoying Commodore's newest marketing strategy as the ultimate home computer.

This chequered history has had a marked effect on Amiga software. After an initial surge of expensive business packages, a slow trickle of games, and a veritable flood of graphics software, the Amiga is now enjoying software support across a range of activities and at prices from budget to professional.

All of which adds up to ever-increasing potential for your Amiga to be the ideal machine – whether for graphics, games, business or just everyday home use. But to release that potential, you need the right software.

So in this, the second of our definitive sector surveys, *Express* brings you the best in what's available for your Amiga.

Choice words

Although the Amiga got off to a reasonable start in this department, word processing has taken a leap forward recently with some excellent products.

In the budget area, *Kind Words* (£38, The Disk Company) is a competent program offering good value for money and if it's only an average word processor at least there's a good spell checker and you can import graphics from other Amiga applications.

Another newcomer giving excellent value and – with certain reservations – excellent performance is *Protext* (£69, Arnor 0733 68909). It's fast, uses both keyboard and mouse according to your preference, offers an excellent spell checker, and handles mail merge. The reservations have to do with *Protext*'s inability to merge graphics with text, which is an essential requirement for many users, and the limited support for editing more than one document. Although *Protext* allows you to switch between two documents in memory, you can only see one at a time (no multiple windows).

At the truly professional level is the No. 1 word processor on the Amiga and most other computer systems, *Word Perfect* (£175, Word Perfect, 0932 231164)

As you'd expect of a product at this price level, you get a lot of power: spell checker and thesaurus, macros, mail merge, tables of contents and index generation, multiple documents open at once in their own windows ... the list goes on. But *Word Perfect* isn't perfect. The current version has no support for graphics and doesn't display the Amiga's screen fonts (although it will print them).

your Amiga

Amiga! The ultimate... Games machine? Business tool? Graphics workstation? Home micro? You can make yours into any or all of these – depending on the software you buy. Express presents the Amiga good shopping guide...

The nearest thing to perfection so far is *Excellence!* (£154, Micro Systems Software) which does just about everything that *Word Perfect* does and several things more: it can import IFF graphics, it will check your spelling even as you type, it will check your grammar and offer suggestions. It also supports Postscript, in case you have a £3,000 laser printer standing around idle.

Back In Business

The Amiga isn't really cut out to be a business computer (unless we're talking A2000 with hard disk), but it can offer a suprising amount of quality besuited software.

On the spreadsheet front is *Maxiplan Plus* (£113, Oxxi), with *Lotus 1-2-3* compatibility, multiple spreadsheets, 63 functions for math, finance, statistics and data manipulation, graphics, and a powerful macro language. Using the Amiga's speech generator it will even repeat entries back to you!

For database users it's nice to be able to report that at least in this department a British product leads the field. In fact, two British products lead the field.

Superbase Personal (£69, Precision Software, 01 330 7166) and *Superbase Professional* (£173) are variations on the same theme offering a lot of power while remaining easy to use. Not only will they handle text and numerical data in commonplace fashion, you can also store and retrieve graphic images, and mix text and graphics within the same record. The *Professional* version gives you added power through its own programming language, as well as extra features like support for telecommunications.

For users needing the usual businesslike trio of word processor, spreadsheet and database without spending a fortune, there are two software collections: *Critics' Choice* (£134, The Disk Company) and *The Works* (£150, Micro-Systems Software). Neither of these is a true integrated package (you can't easily switch from one to another, nor easily move data between them) but they do offer good value for money.

The Works (part of Commodore's ill-conceived business bundle with the A500) consists of *Scribble*, *Analyse* and *Organise*, three individual packages which usually sell for around £40 each. *Critic's Choice* has a slight edge both in cost and value since it offers *Kind Words*, *Maxiplan*, and *Microfiche Filer* (a close runner-up to *Superbase Personal*).

Graphic traffic

Where graphics software on the Amiga is concerned, you're really spoilt for choice. There are several excellent paint programs, a number of first class drawing and CAD packages, and intense competition in the field of solid 3D images and ray-tracing.

The starting point is *Deluxe Paint II* (£70, Electronic Arts, 0753 49442) which sets the standard for the other contenders. Not least of the many points in its favour is the fact that it's easy to learn and easy to use. But it's also powerful, with a comprehensive array of drawing tools, custom brushes, support for perspective drawing, and the ability to create images larger than 1,000 pixels both horizontally and vertically.

Its two near rivals are *DigiPaint* (£60, NewTek) and *Photon Paint* (£70, Mediagenic). Both use the Amiga's HAM mode (4,096 colours on screen simultaneously), and in addition to the usual

☞

range of drawing tools *DigiPaint* offers special effects like bleedthrough for a watercolour effect and the ability to create negative images, while *Photon Paint* provides strong support for tilting and rotating images, as well as letting you map them on to 3D objects.

For more technical drawings and illustrations *Professional Draw* (£95, Gold Disk) looks like an outstanding tool. It's an object-oriented graphics program (as opposed to the more common bit-mapped paint programs) that allows you to build up images through smaller objects. The advantages are that even after several magnifications the image doesn't distort into jagged lines.

Professional Draw offers extra tools for rotation and reflection, full text support, the ability to produce colour separations and Postscript support for high-quality output.

The real growth area in Amiga graphics is in 3D modelling and ray-tracing (the process of adding realistic lighting, shadows and reflections to your images). There are now half a dozen very strong contenders in this area.

The current leader of the pack is *Sculpt 3D* (£56, Byte by Byte), used to create some of the classic Amiga images like *The Juggler*. Although the method of creating the images can be painstaking, and you'll need to set aside many hours for the program to do its stuff with ray-tracing, *Sculpt 3D* is an outstanding program.

However, reports from the US indicate that a strong challenger is on the way in the form of *C-Light*. The advantage of this package is its ease-of-use, especially compared to the established programs like *Sculpt 3D*, which makes it especially attractive to beginners in the ray-tracing world. With a US price of only $49 (around £25) it should offer unbeatable value for money too. Watch out for this one.

Professional Page (£249.00, HB Marketing, 0895 444333) is the only real professional page make–up package – it can cope with colour separations and has been compared to Macintosh programs such as *PageMaker*.

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Game points

For those in love with things that fly, *Interceptor* (£25, Electronic Arts) had the adrenalin pumping throughout 1988 and although a little weak in the simulation department, its outstanding graphics and gameplay put it at the top of the heap.

Whether it will remain on top depends on the arrival of *Falcon* (£30, Mirrorsoft, 01 377 4645) which – astoundingly – promises to beat *Interceptor* in every department. We wait with baited breath ...

For the more sedate winged experience, *Flight Simulator II* (£35, SubLogic, 01 439 8985) is still the last word in realistic flight, with great graphics and accurately recreated instrumentation, *FS* goes from strength to strength and the arrival of add-on scenery disks – including Britain and western Europe – widens the appeal.

Definitely not a simulation but still in the air, *Thunder Blade* (£25, US Gold, 021 356 3388) has gained universal approval and – although it's always dangerous to make early judgements – this aerial blaster looks set to become one of the all-time great arcade conversions.

One problem with a lot of early Amiga games (and rather too many recent ones) was their tendency to sacrifice gameplay for luscious graphics. However, everyone should have at least one Cinemaware game in their collection and that one is probably *Rocket Ranger* (£30, Mirrorsoft) since it has rather more gameplay than usual – save the world and beautiful damsel from Nazi domination – while maintaining the high quality of graphics.

Two games that put gameplay firmly before everything else are *Arkanoid* (£25, Imagine, 061 832 6633) and *Shanghai* (£25, Mediagenic, 0734 311666). *Arkanoid* – as if anyone didn't know – is a fast yet compulsive development of the old *Breakout* format, but done with great style and imagination. *Shanghai*, by contrast, is all brainpower – a solitaire game that has you removing pairs of Mah-jong tiles from a pattern in an attempt to clear the screen. Sounds dull but it's disgracefully addictive and the graphics are gorgeous.

For role-playing gamers the two serious contenders are *The Bard's Tale* (£25, Electronic Arts) and the recently-arrived *Dungeon Master* (£25, Mirrorsoft). Both involve a good deal of dungeon-delving, mapping and monster-bashing; the differences are that *Bard's Tale* has a little more depth to the gameplay while *Dungeon Master* is played in real-time with animated graphics. If in doubt, buy both – you won't regret it.

Finally, and forever, there's *Elite* (£25, Firebird), the all-time computer classic in which you start as a humble little oik at the controls of a Morris Minor of the spacelanes and rise to become an Elite personage by dint of killing, trading, killing, cheating, stealing and killing. The Amiga version is clearly the best ever with unbearably lovely graphics and sound.

Classics in music

While the ST might have built-in MIDI to control external synthesisers, the Amiga has Paula, a built-in synthesiser all of its own. Couple that with the Amiga's standard stereo output and you've got a ready-made system capable of producing some outstanding music without spending hundreds of pounds on MIDI equipment. All you need is some software.

The outright leader is *Deluxe Music Construction Set* (£70, Electronic Arts) which does for music what word processing does for writing. You create your music by placing notes on a stave, listening to your composition, removing or amending notes as necessary, and so on until you have a work that Mozart would be proud of. At least that's the theory. In practice *DMCS* is ideal for music students or experienced musicians but a bit daunting for beginners.

If you fall into the novice category you need *Instant Music* (£25, Electronic Arts) which doesn't force you to deal with staves, clefs and crotchets. Instead you use coloured blocks to indicate musical pitch, and you can even use presets to play music in real time while the computer stops you making ear-wrenching mistakes.

Here comms everybody

As is usual with machines where the bulk of the software is coming from the US, comms presents the problem of finding software that supports the Prestel/viewdata standard. However, there is a home-grown product that not only fits the bill but happens to be a good general comms program: *Ruby View/Term* (£99, Y2, 0923 50161).

If you can live without viewdata you can save some money. *Diga!* (£60, Aegis) was one of the first comms packages for the Amiga and has a wide following, and *Online!* (£35, Brown-Wagh Direct, 01 603 3313) is also highly recommended.

Utilities

If any computer needs a helping hand from utility software it's the Amiga. Cursed with slow disk drives and an operating system that brings new meaning to the expression "user-hostile", the Amiga can be dramatically improved through the use of a few small programs.

One of the earliest and still among the best is *Zing!* (£55, Meridian Software) which lets you control AmigaDOS through a point-and-shoot front end to the CLI. Moreover, it loads as a background task and can then be called up by pressing a "hotkey" so you have easier control of AmigaDOS and it's always available. From the same publisher comes *Zing Keys* (£35), a macro generator that let's you compile oft-used DOS commands and actions into single keypresses.

A partial remedy to the slow drive problem is provided by *FACC II* (£24, ASDG), a disk caching utility that can turbocharge disk operations. You'll only see dramatic improvements with disk-intensive tasks like spell-checking in word processors, but it's a lot cheaper than a £500 hard disk. ●

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Base motives

• "The main consideration is to find a product which does what you want without overwhelming you."

You hear the phrase 'computer database' everywhere – and for many users databases are indispensable. But what are they? Peter Worlock organises the information

Although there's a natural tendency to equate computers with number-crunching – mathematical processing, statistics, accounts and so forth – most business computers are information processors. And the key application is not the spreadsheet, or the word processor, but the database.

In most cases "data" means lists – of customer names and addresses, lists of products for sale, lists of prices, lists of component parts. Data can also be less structured, in the form of more or less random collections of facts and figures, but even here the computer can bring order and it is in this area that the computer and a database program can be of most use to the individual. Like me and you.

What does a database do?

In order to do anything useful a database obviously needs some data to work with, so the first thing the program does is allow you to assemble some data.

How it does this depends on how structured the database is. Some programs are highly structured in that you have to decide in advance what form the data will take.

So if you want to set up a name and address file, for example, you have to determine whether you want the program to accept "John Smith" as a piece of data, or "Smith, John", or whether "Smith" and "John" should be two separate pieces of data. You have to make similar decisions about addresses, and so on.

Other programs are less structured: they allow you to enter data in huge chunks and then organise it afterwards. Still others have hardly any structure at all – you can feed them data in any shape or form, from a single name to a chapter from a book, and they will deal with it quite happily.

Once you have some data assembled the database then allows you to organise, or sort, it. There are two reasons for having sorted data. The first is for the computer's benefit since it can find any given piece of data much quicker if the data is organised in some logical fashion.

The second is for your benefit so that you can move around the data in logical fashion too. Imagine how irritating a telephone directory would be if after all the "Smith, A" entries on page 150 you found a note saying, "Turn to page 328 for next entry" and then after the "Smith, B" group another note commanded, "Turn to page 16" to find the "Smith, C" collection.

A computer can deal with this sort of arrangement quite happily but it's very wearing for humans.

So, now that your data is organised you can begin to do something useful with it. In particular, you can begin to ask the database program questions, and at this point your raw data becomes "information" (at least, that's the idea).

Querying the database can take a number of forms, depending on the power of the program. At the simplest level it might be something like getting John Smith's telephone number. On a large business system it could be extracting the names and addresses of every client who used to regularly spend more than £1,000 per month but hasn't bought anything in more than eight weeks.

From these brief details it should be clear that database programs come in almost infinite shades of power and complexity. But it's possible to break them down into a few broad groups.

The card box

As the name suggests, this type is a straightforward electronic version of the common card file. You often find that the program presents you with a screen display that actually looks like, or at least resembles, a standard 5.25" index card.

On each of the lines, or fields, on the card you can enter a separate piece of data – a name, address, book title, author, whatever you want. The program then sorts the cards, usually according to the first line, so if you have surnames on the first line you get a database with all names and addresses sorted alphabetically by the initial of the surname.

Querying a card index program is usually very simple and therefore limited. At the lowest level the program will display an entire card in response to a name. Slightly more complex programs might do simple extractions so, for example, you could pull out all cards of people living in London.

This kind of program lends itself to handling the kind of data that already has a natural structure and where there isn't too much data for each record – an address book, or a catalogue of books, say.

The flatfile database

Not too dissimilar to the card index but without the rigid card structure, the flatfile database is probably the most common form of database program for personal computers.

As far as data entry and structure goes, the flatfile program merely allows a greater variety and number of fields. The real change in power and complexity comes in the way in which you can query the database.

For example, you can sort the data in different ways, extract data that fulfills a variety of criteria,

Debased by dBase

You've probably heard already about *dBase*. There's no doubt that in the world of database software the name of Ashton-Tate's prodigy is the biggest. But many people (especially dealers with an eye on the big sale) are blinded by this success and overlook one crucial fact: *dBase* is less of a database program, more of a database programming language.

That means that for most of us, *dBase* will be the wrong solution more often than it's right. *dBase* is the right solution if you have some humongous data management problem (like running a small country), or if you want to create database applications for other people to use.

But I'm sure that for most people *dBase* is too powerful, too expensive and too complex.

and generate reports that can be stored in a separate disk file or printed. Imagine you were running a general-interest computer group. With one database file on members, you could divide members by the different computers they own, or by their geographical location, or you could quickly find out who was behind in their subscriptions. If you wanted to do a general letter to all members you could print all names and addresses to labels, or you could alert only Amiga owners of a special meeting, or you could do a general mailing but add special notes to those members behind in their subs with a second note to Amiga owners.

The relational database

Again, the differences between the flatfile and the relational database are not too great. But there is another step up in power and complexity.

In simple terms, the relational database can handle more than one file simultaneously and it can "relate" the data from one file with another. For example, imagine your user group is now a very big user group; so much so that it has split into sub-groups for different machine owners, with further sub-groups for special interest subjects like communications, programming and music.

The organisation is now getting too complex for the existing flat-file database because to have all the information in one file will make it too big and unwieldy. But if you split your data into separate files you have problems. If you send a letter to the Amiga owners now you have to work from three different files (one for each sub-group) and anyone belonging to all three groups will get three letters – and three demands for subscriptions each year.

And suppose that one member sells his Amiga and buys a PC. You have to make changes to each of your files – the Amiga owners file, the PC owners file, and the files for each of the sub-groups.

The relational database can breeze through these problems because it will treat each of these files as parts of a single collection of data, and changes in one file are automatically carried through to other files.

The freeform database

This category is a recent development and differs from the types discussed so far in that it doesn't require any kind of data structure. A lot of the information we deal with doesn't naturally break down into logical categories.

Imagine the desk of an fairly typical office worker: there might be several notes from incoming phone calls, reminders to make some outgoing calls and other "things to do", several diverse memos, some scribbled ideas. The only thing these different items have in common is the worker and his or her job.

Trying to fit these random bits of data into a structured database would be impossible, but a freeform database will accept them as they are. The worker could then enter any word or phrase as a key and the program will extract from the morass of facts and figures any items relating to the key.

So "John Smith" might produce an address and phone number, a note made during a call from Mr Smith last week, a reminder to call him back next week, an internal memo relating to Mr Smith's business, and so on.

Which one's right for me?

From the foregoing descriptions you probably have a reasonable idea of which kind of program you should consider. The main consideration, as always, is to find a product that does what you want without overwhelming you.

If your hobby is, say, collecting stamps, a card index program would be sufficient for your needs. A similar product would do for maintaining an index of articles in technical magazines.

For more complex tasks, up to and including running a small business, one of the many flatfile databases should provide sufficient power and flexibility without getting you bogged down in designed data structures and setting up complex reporting procedures.

Larger businesses might be able to employ a flat-file program but a relational database is probably nearer the mark. A good criterion for deciding between these two types is to imagine a printed form which would provide the information you want to handle.

If all your information can be held on the same kind of form, a flat-file database will almost certainly suffice. However, if you discover you would need different forms for different kinds of operations, look to a relational database. ●

Technobabble

A weekly assault on computer jargon

Database

Field: the smallest piece of data in a database – a name, postcode, book title etc.

Record: the next unit up from a field, a collection of data relating to a single person or object.

File: the top-level of a database, a file is collection of records. You can picture a database like the drawer of a filing cabinet: the file is a folder containing the records, the records are like printed sheets or forms, and the fields are the individual boxes on the form.

Index: a special kind of file which is attached to a data file. The index file cross-references the data according to how it has been sorted, so while a name and address file might be stored in alphabetical order by surname, the database could also generate an index by town, or postcode, or income, or any other aspect of the data.

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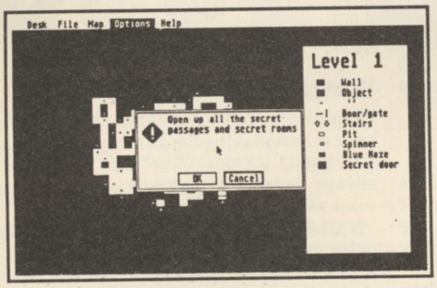

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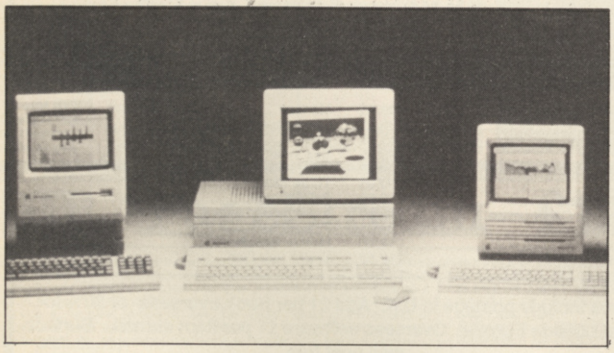
What NeXT for Jobs?

The story of the man who invented the personal computer is that of Sixties idealism and young, rich America. But his empire unravelled and collapsed as he came to believe in his own mythology. Mike Scialom tells the story of Steve Jobs...

Whatever the success of his current company NeXT, Steve Jobs is already assured of his status in the computer revolution. He founded Apple in 1975, based on a bunch of half-baked ideas spawned by Californian idealism, and took it to billion-dollar status before leaving ten years later. In those ten years his name is associated with two of the most influential of all computers – the Apple II and the Macintosh. The Apple II sold over two million units, and the Macintosh gave birth to the desk top publishing revolution, which is now accepted as one of the building blocks of post-industrial society.

As if that wasn't enough, his personality is a long way from the image of the inarticulate boffin, and his poetic faith in the potential of computers has made him a symbol for the new culture he helped create. His outrageously brash style of pursuing success is heavily influenced by the LSD and Zen Buddhist experiences he had in the Seventies. This resulted in his being a millionaire at 23 and valued at $200 million at 25, giving him an uncomfortably high profile in the media spotlight which he seemed happy to shed when he left Apple (getting this picture of Jobs from California took nearly three months!).



• Apple of his eye: the Mac computer family has become standard for desktop publishing work

More than this Jobs' worth

But what fired him initially was not money or even technical know-how. From teenage days on, he wanted to match his mind against the best in a chosen field and come out on top. In his early teens he hung around the garages of Hewlett-Packard engineers (in what was soon to be Silicon Valley), picking up tricks. He wanted to learn what they knew and anticipate what should happen next – then be the first to bring it out. Having grown up in Sixties California, Jobs was the first to apply Sixties counter-culture principles to the business of selling computers – this in a business where IBM tried its damndest to ensure that innovation and low prices were obliterated in favour of 1984-style global corporate blandness.

As Apple grew bigger than his wildest fantasies, Jobs' quest for the ultimate computer became ever more personal, but he remained true to his dream of wanting to see personal computers at realistic prices with "insanely great" (a favourite phrase) screen graphics and an easy-to-learn operating system that everyone could use. The eventual product – the Macintosh – is now accepted as the starting point for professional DTP use, even though the high price reflects Apple's failure to make computers that can be bought for home use (outside of wealthy America!).

The patents of Jobs

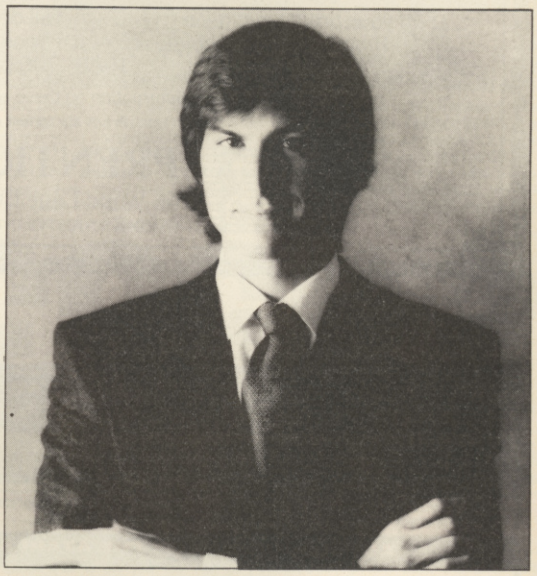
But when Jobs started out there was no personal computer market. Mainframes were in regular use in business, but Jobs and partner Steve Wozniak reckoned that people would use one if they could get one – even though they had no idea what for. Early decisions in making their vision come true included "Should the keyboard have upper or lower case?" and "Is there any point advertising outside the electronics hobbyist market". Not only did Steve say "Yes" to the second question (they chose upper case in answer to the first), but he went on to hire a public relations company to help sell the product, and thus gave birth to his own brand of computer evangelism which made Apple a household name within ten years – and almost took it to the bankruptcy courts through his own unstoppable over-spending.

In the early days Jobs' confidence and ability to swing a deal took Apple places fast. His skills – the ability to see a pattern and the will to enthuse others to build it – made Apple phenomenally successful with the Apple II during the late Seventies. But things started to go wrong, first with the ill-fated Lisa and Apple II models, then with the perseverance with which Jobs pursued his vision of the Macintosh even though it seemed an impossibly utopian computer (this was in the days when the business world was still reeling from the implications of the IBM PC).

Finally, Jobs seemed to get out of hand and the painful process of removing him from Apple started, culminating in his resignation as Chairman in September 1985. His excesses had already become notorious – buying up all the advertising space in *Time* when the Mac was launched, plus placing a full page ad in the Wall Street Journal to declare: "Steve Wozniak and I invented the personal computer."

But the glory goes to Jobs for taking the risks. He sold Apple as a big company right from the start. He cajoled and harrassed those who worked for him with a mixture of Marco Polo adventuring into the unfolding implications of computers as mind tools – and displays of contempt and rudeness which shocked those who were not used to it. Through it all he had an innate sense of the art of turning a deal when up against it .

Even today, he seems to get his kicks by confounding the pundits and his critics. Thus the NeXT computer with its amazing operating system and CD-ROM potential for the education market. No doubt he's already working to do away with the keyboard in favour of speech recognition and touch-screen input, along with movie-style graphics and huge storage facilities.



• Steve Jobs: Zen and now

Action for Jobs

Still only 32, Jobs is worth watching. His knack of using the media to help promote his products could just as easily be used for other ventures. When he left Apple, he was said to be thinking of moving into politics. Nor does this seem as outrageous an idea as it first sounds. Jobs is one of the first of the counter-culture radicals to use the existing machinery of business so successfully. Having mastered the principles, he could as easily swing them into political focus. After all, we've just finished an eight-year presidential stint by a movie star – what could be more logical than a computer whizz-kid as President in the next century? But this could only happen if Jobs lost his need for control over everything he does, and the quest for computing perfection shows no sign of abating at the moment. However, with NeXT it seems unlikely that he will ever build a company as big as Apple, because the more he insists on the quality of his vision the higher his prices go.

Whatever happens NeXT-wise, the DTP revolution is now running under its own momentum and its potential is still being discovered. For that we owe something to the Zen crazy who insisted on his vision of the future against the wishes of the biggest computing guns in the world's most competitive marketplace. ●

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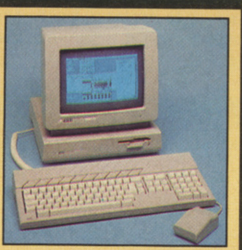

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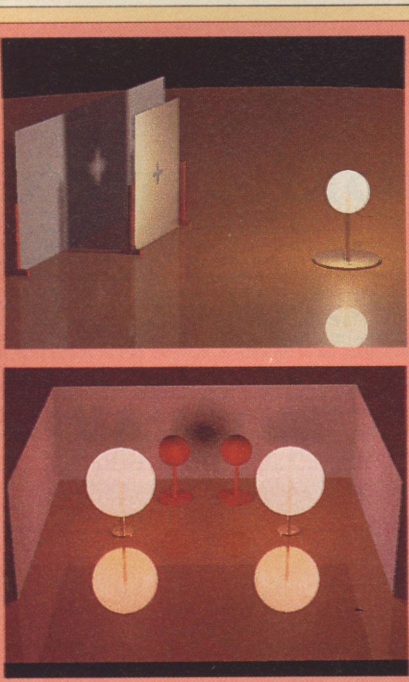
Da Vinci

Leonardo Da Vinci has been variously described as The Last Of the Polymaths and The Man Who Knew Everything. Between 1481 and 1516 he worked as a sculptor, painter, designer and engineer and produced thousands of detailed drawings in an attempt to help future generations create "a second world of nature". Some of his ambitions are now being realised in the stunning computer simulations produced by IBM. Andy Storer travels the five hundred years and returns wondering what Da Vinci would have done with a mainframe.

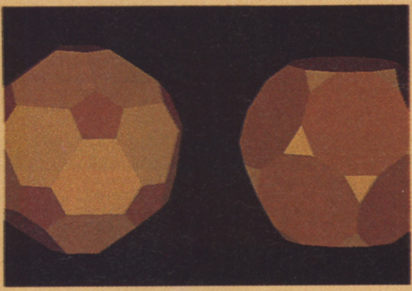
Between 26 January and 16 April, The Hayward Gallery in London plays host to the first large-scale exhibition in this country of the work of Leonardo Da Vinci. Artist, inventor, scientist and engineer, it seems only appropriate that this collection of Da Vinci's work should be



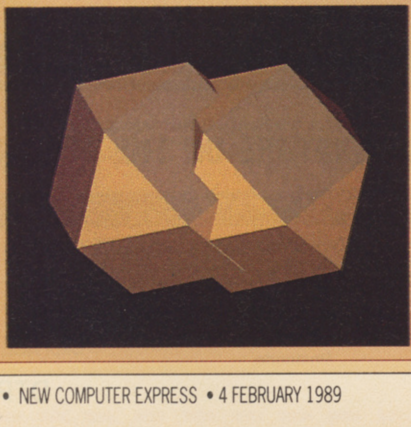
Shadow and Light

A 150 second series of animations conveying Da Vinci's series of experiments on the interactive effects of light sources and spheres. The studies were essentially concerned with detailing his techniques for rendering soft shadows in his paintings. A series of plan drawings dissolve into revolving spheres and multiple light sources – both being independently transformed by graded scaling.

Geometrical Bodies

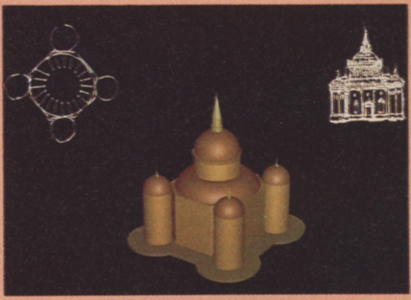


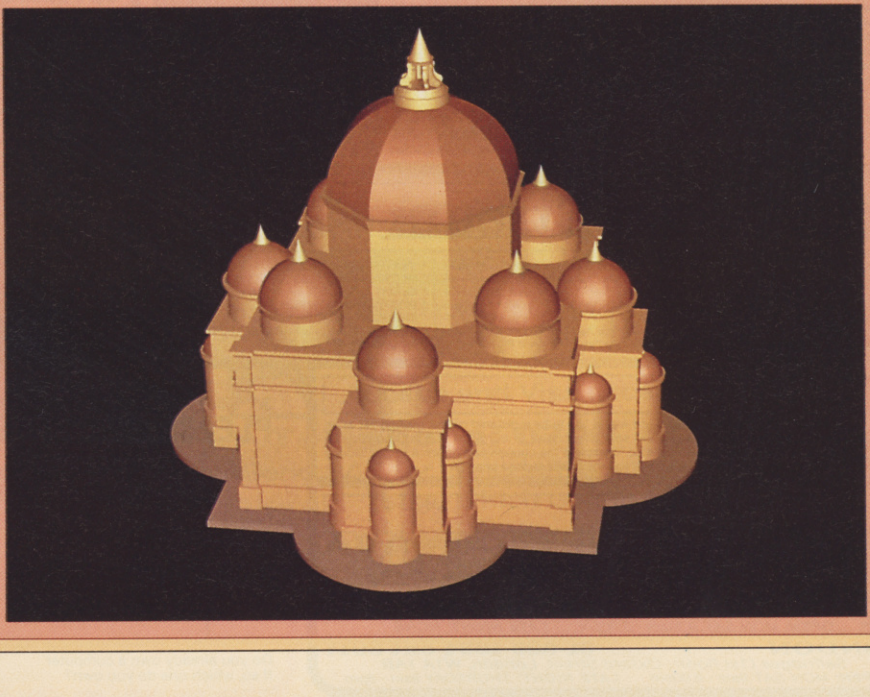
A tape visualising Da Vinci's study of perfect forms and search for "Divine Proportion". Over 160 seconds, five regular and semi-regular polyhedra, solid bodies whose faces are triangles, squares and pentagons, are individually manipulated to show how they may be transformed into one another by a process of truncation. The solids change in size and form before merging into each other with an ease that escapes even the most concentrated viewing.



Centralised churches

A 140 second animation of Da Vinci's designs for churches with centralised symmetry built up from squares, octagons and circles. None were ever built. The sequence shows the relationship between six designs with octagonal central spaces selected from some thirty schemes drawn between 1487 and 1490. The tape shows the six buildings evolving upwards from flat 2D plinths and then revolving to display all facets. As with all of the animations on hand, the movement is exceptionally smooth.





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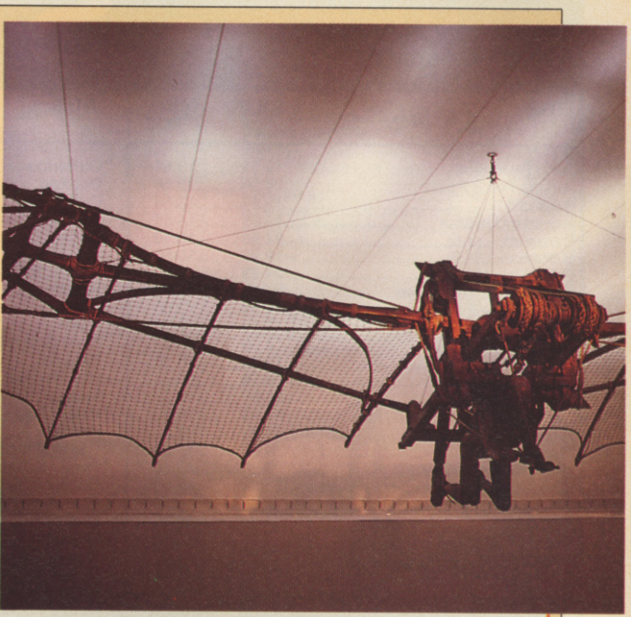


sponsored by IBM UK, whose recent forays into Arts funding were featured in *Express's* Issue 5 piece on computer-sculptor William Latham.

The expo comprises 120 drawings lent by major institutions in Paris, New York, Florence and Madrid, but transforms the traditional 2D representations by including 15 large-scale models of Da Vinci's visionary engineering projects.

Dominating the exhibition space is his famous flying machine with a wingspan of 36 feet. It was constructed from Da Vinci's blueprints of the late 15th century, based on studies of bird flight. This has been constructed from the materials originally intended – beech, iron, brass, leather and tallow.

But of greater note is the inclusion of state-of-the-art, solid 3D computer graphics produced by IBM at its Scientific Centre in Winchester. There are five different tapes on show which highlight the recurring geometric themes in Leonardo's studies of perspective, light and shade, perfect forms, branching and architecture. ●

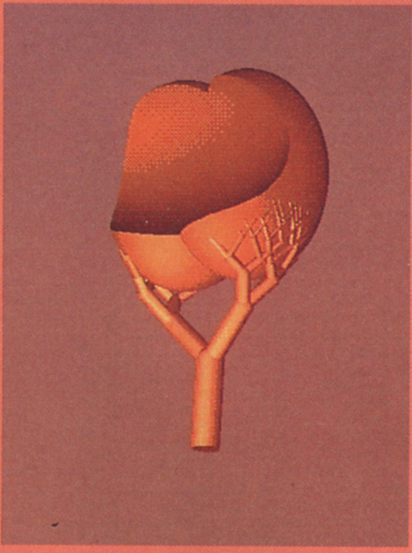
Generating Genius

There are five sequences of animation to illustrate various aspects of Da Vinci's vision. Each is 2 – 3 minutes long and in total comprises some 20,000 frames of 1,000 x 1,000 pixel screens. These frames were produced using IBM's own custom software – the award winning WINSOM, ESME AND SLED – which are principally used for the "scientific visualisation" of engineering component design.

WINSOM is used to generate solid models from wire-frame vector forms defined by ESME. The resulting rendered models are then highlighted by SLED, its main feature being that the user defines the effect he wants the light to have and the software places them accordingly.

The system is based entirely on 3D and, as such, Da Vinci's drawings had to be transposed by hand into 3D plans with elevations and scales all notated. The data was then fed into IBM 4381 and 3081 mid-size mainframes where the resulting wire-frame models are rendered, texture mapped and ray-traced with multiple light source illumination. This process can take anything between one and ten minutes even for a mainframe, so there's no possibility of producing fully ray-traced animated sequences in real time.

Until such time as they can utilise the network of 35 transputers they intend to run in parallel to speed things up, the IBM team plan their animations by making slight alterations to the viewpoint and scaling of each individual frame. A sequence is then derived by transferring, in the desired order, each and every frame onto broadcast quality Betacam videotape. In this case the continuous transfer of all 20,000 frames took 48 hours.

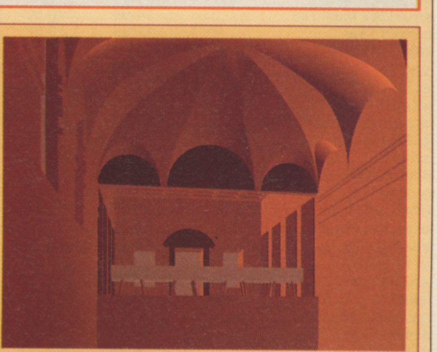


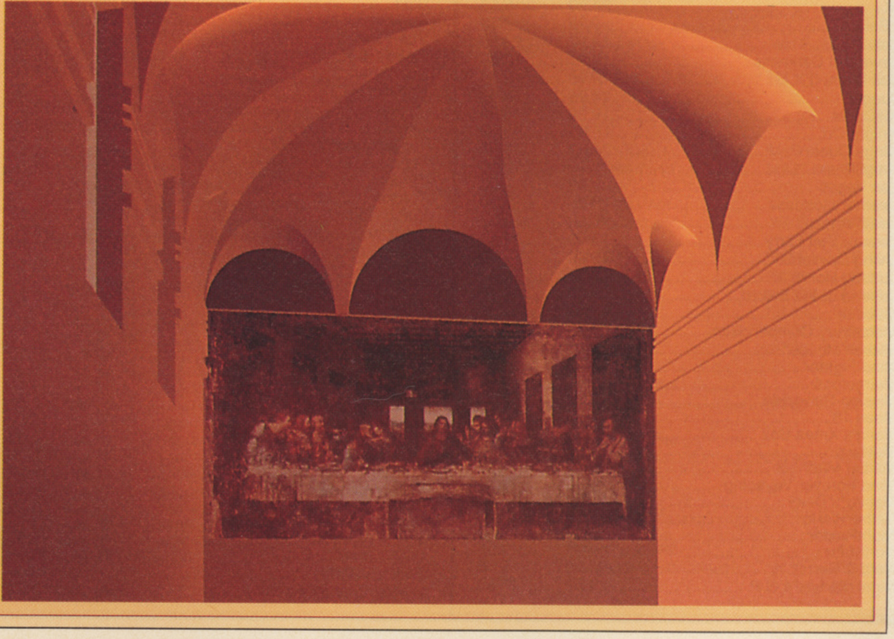
Branching

A rendition of studies of the geometrical forms of growth illustrating the similarity between branching systems in tree, river and lung systems. Each system is shown evolving from simple origins into complex dendritic structures before being revolved.

The Last Supper

This 95 second sequence illustrates the problems of perspective encountered by Leonardo in producing a painting designed to hang high above a viewer. A perfect illusion is called for since all you would see of The Last Supper otherwise would be the underside of the table! The animation begins with a simple drawing superimposed on the painting surrounded by a computer generated construct of the Milanese refectory in which it hangs. The "camera" viewpoint is then treated to a series of flawlessly smooth slow zooms, pans and elevations before pulling out completely from the modelled building for a full 360 degree dynamic revolution of its exterior.





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Tool Kit	39.99	29.50
Turbo Silver	139.99	115.00
Video Titler	110.00	85.50
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XCad	460.00	325.00
Zuma Fonts (1-3) (Each)	34.99	24.50
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E-Type	39.99	29.50
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Con. Sound Tratton (Age 4+)	31.95	24.50
Matchit (Age 2+)	31.95	24.50
Mathamation (Age 13+)	69.99	50.50
Mathamagician (Age 6+)	39.99	29.50
Robot Readers (Childrens Stories) (Each)	24.99	18.50

Hardware List

A500 Amiga (inc Built in Disk Drive and 1.3 Kickstart, Mouse, Power Supply, Workbench "The Very First" and Modulator)	399.00	360.00
A500 Amiga with 1084/S Colour Monitor	649.99	620.00
1084/S Colour Monitor	299.99	260.00
A500 Amiga, 1084/S Colour Monitor and 2nd Disk Drive	749.99	665.00
1084/S Colour Monitor and Philips TV Tuner	399.99	360.00
Philips TV Tuner	99.99	95.50
Cumana CAX 354 Standard Disk Drive	99.99	95.50
Cumana CAX 354 with Power Supply	150.00	135.00
Genlock 8802	299.00	270.00
Triangle Broadcast Quality Genlock	915.00	850.00
A501 1/2 Meg RAM Upgrade for A500	175.00	150.00
B2000 Amiga	1269.00	999.00
B2000 Amiga and 1084/S Colour Monitor	1494.00	1350.00
A2058 (8Mb RAM Board Populated with 2Mb)	746.35	695.00
A2088 XT Bridge Board	607.20	573.00
A5060/A2092 20Mb MSDOS Hard Disk	402.50	395.00
A2090/A2092 20Mb Amiga DOS Hard Disk	460.00	445.00
A2010 Internal 3 1/2 Disk Drive	196.65	172.00
Cumana CSA100S External 5 1/4 Disk Drive	120.00	115.00
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Star LC10	343.85	315.00
Star LC24/10	458.85	425.00
Star NR15	688.85	660.00
Star NB24/10	759.85	735.00
Star NB15	1056.85	985.00
Star Lazer 8	2287.00	2195.00
14" Cotron Hi Res Colour Monitor	747.50	695.00
20" Cotron Hi Res Colour Monitor	2070.00	1879.00
Cherry Pad A3 Digitising Tablet	632.50	595.00
Video Driver Card (Must be sold with Cotron)	396.75	360.00

● All's quite on the 8-bit front this week, alas, as we've undergone a bombardment of ST and Amiga releases.

Interestingly, most of the games have been of a sporty, non-violent nature. Has the cry for less violent games finally been heeded by software houses?

Infogrames' *Billards Simulator* proves that non-violent games can still have gameplay, while with *Slip Stream*, has the shoot-em-up reached an all time low?

CAPTAIN FIZZ

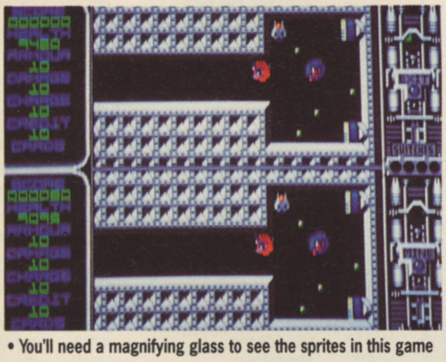
PSYCLAPSE/SPSYGNOSIS

ST • £14.95dk
Also on Amiga

***Captain Fizz Meets the Blaster-Trons* might sound like a Gerry Atric puppet production, but it is in fact a exploration-type shoot-em-up with a neat simultaneous two-player/split screen option.**

● GAMEPLAY

The normal combination of shooting, collecting and exploring screen after screen is uplifted by *Captain Fizz*'s simultaneous two-player option as you and a friend will have to collaborate if you want to rid the planet Icarus of the repellent Blaster-Trons.



• You'll need a magnifying glass to see the sprites in this game

Progression through the 22 levels of the game will depend on quick wits, a fast trigger finger and a strategic mind as you explore the hidden wonders of Icarus. Your every move is met by a bunch of hostile Blaster-Trons, firing ricocheting laser bolts at you in the confined spaces of the planet's complexes.

Fortunately, help is at hand in the form of collectable armour, increased firepower and keys, which will help you in your mission.

● GRAPHICS AND SOUND

Psygnosis' usual high standard in audio-visuals is curiously missing in *Captain Fizz*. Perhaps the only way you can tell this is a Psygnosis release is when you see the excellent title page as the game loads in.

Visuals comprise minuscule sprites and average backdrops. Audio is made up of unexceptional sound effects for the explosions, lasers, etc.

● OTHER VERSIONS

We've yet to see the Amiga version, but it should be on sale as you read this.

● EXPRESS VERDICT

With its simultaneous two-player/split-screen view option, challenging gameplay and 22 levels of play, *Captain Fizz*'s lack of spectacular audio-visuals is more than compensated for. And it definitely represents good value priced at £14.95.

Well done Psyclapse/Psygnosis – we hope other software houses produce more games for the ST and Amiga at this price.

✪ ✪ ✪ **Rik Haynes**

THE GAMES – WINTER EDITION

EPYX/US GOLD

ST • £19.99dk
Also on Spec, C64, CPC, Amiga, PC
MSX and Apple II versions under consideration

Following on from the other Epyx sports-simulations, *The Games – Winter Edition* is an eight-event compilation of winter sports using the traditional joystick-waggling approach.

● GAMEPLAY

Each of the eight events – Speed Skating, Skiing, Downhill, Slalom, Ski Jump, Cross Country Skiing, The Luge and Figure Skating – requires different joystick-waggling tactics in order to progress successfully through the game.

Many of the events are seen from varying viewpoints during play, such as side-on or even a birds-eye view of the action. This diversity does help otherwise monotonous and repetitive game from becoming too stale, too quick.

● GRAPHICS AND SOUND

Some attractive flip-screen, still and scrolling backdrops are marred by the rather inadequate sprite animation sequences, although there are the usual Epyx sports-sim "nice-touches" such as the players turning into giant snowballs if they fail in the Slalom event.

What cannot be forgiven, however, is the uninspiring audio, in the form of the soundtracks and abysmal sound-effects heard throughout the game. Audio could do with a great deal of rectification.

● OTHER VERSIONS

It seems the greatest implementations of Epyx sports-sims are on the micro they perhaps know the best: the C64. It appears as if the audio-visuals are copied over from the C64 onto the other formats – with slight improvements or deteriorations depending on the capabilities of the micro in question.

● EXPRESS VERDICT

It's not that *The Games – Winter Edition* is that bad, it's just not that new. C64 gamesters were playing this type of game five years ago. The style and gameplay haven't undergone any significant developments since those early days. The only advancements after the first Epyx sports-sim have been the continual improvements in audio-visual quality, although even these enhancements have become increasingly less profound over the past few releases. In fact, one can quite confidently say "seen one Epyx sports-sim, seen 'em all".

• Eddie the Eagle strikes again

This leads on to the unfortunate conclusion that *The Games – Winter Edition* can only be recommended through the lack of any superior sports-sims being available elsewhere. A great pity.

✪ ✪ **Rik Haynes**

SLIP STREAM

MICRODEAL

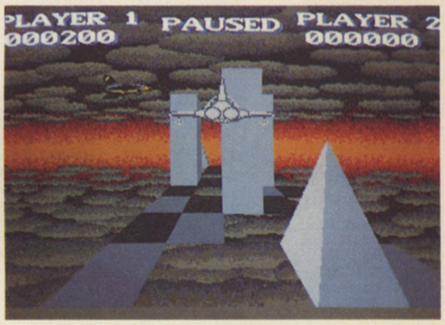
Amiga • £19.95dk
No other versions known

***Slip Stream* is a head-on shoot-em-up from Microdeal, the maker of *Goldrunner*, *Airball* and *International Soccer*. So it should be another good game, right? You couldn't be more wrong...**

● GAMEPLAY

After launching from your mothership, you must guide your spacecraft through nine streams of the Slip Stream in order to free the streams from an invading alien force.

Dangers during play not only consist of alien spacecraft throwing flak at you, but also the natural hazards of the streams such as giant skyscrapers, hills and walls which must be negotiated if you don't want to crash, explode and turn into vapour. And believe us you wouldn't want that, because you'd have to go through the same boring mothership launch sequence every time you died.



• Don't be misled by the pic – graphics are clumsy and slow

● GRAPHICS AND SOUND

Upon first glimpse of *Slip Stream* you are greeted with a full-screen display with a competent skyscape – but this reasonable impression soon disappears forever as you encounter the onslaught of the totally appalling visuals which bombard your eyes from then on.

The scenery moves along at an incredibly sluggish pace, complemented by an inferior quantity of animation frames – which look like a sequence of 17 frames per minute rather than second. This is matched perfectly by the simplistic graphic design employed in the creation of all the sprites and backdrops throughout.

Audio, too, is of an equally low standard, with muffled speech, tiresome sampled sound-effects and a terrible off-tune soundtrack on the title page.

● OTHER VERSIONS

No details on any other versions are currently available.

● EXPRESS VERDICT

Limited and repetitive gameplay, chronic visuals and irritating audio help to make *Slip Stream* the worst game we've seen in 1989 thus far. Quite an achievement Microdeal, but certainly not one to be proud of.

For far better forays into head-on blasting try *Thunderblade* by US Gold or *Galactic Conqueror* by Titus, because *Slip Steam* just gives the impression of having been programmed entirely in BASIC – and an inferior version of BASIC at that.

✪ **Rik Haynes**

BILLIARDS SIMULATOR

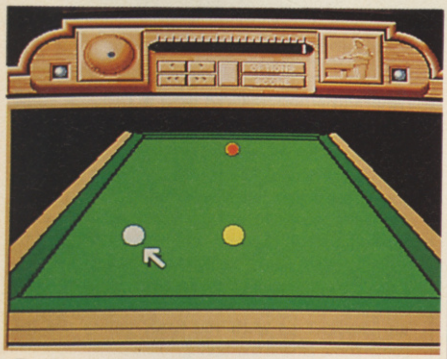
ERE INTERNATIONAL

Amiga • £19.95dk
Out soon on ST, PC

Kicking off with a natty bit of piano playing, the first 3D billiards sim looks and sounds very slick. But will it have you reaching for your pocket?

● GAMEPLAY

Probably not, since there aren't any pockets. This is French billiards, so the game comprises cannons only. It's simply a question of hitting both the red and your opponent's ball with your own to score a point. You can play alone, against another player or against the machine. As you're able to choose between three types of cue and the "gravity" of the balls, besides determining cushion friction, rebound, spin and table friction there's more than enough to give you a good game.



• The simple graphics hide a feast of features

Useful, too, is the ability to retake any shot you fluff, as many times as you wish. Combine this with a ball on-screen showing the point of cue contact, and you can begin to understand spin and its results.

● GRAPHICS AND SOUND

There are both 2D and 3D views of the action on hand, and the latter is the most innovative with ball movement handled very smoothly. Cue position is determined by clicking on the left mouse button, cue elevation with the right. Sound is confined to the thunk of the balls colliding with each other and the cushions.

● OTHER VERSIONS

ST and PC releases are planned, but are as yet unseen

● EXPRESS VERDICT

A well presented simulation which might actually teach you something of the mechanics of billiards and snooker. In the long term it's got to be a much cheaper way of practising your spin. Well worth checking out.

✪✪✪✪

Andy Storer

ZANY GOLF

INNOCENT FUN

ELECTRONIC ARTS

ST • £24.95dk
Also on Amiga, PC

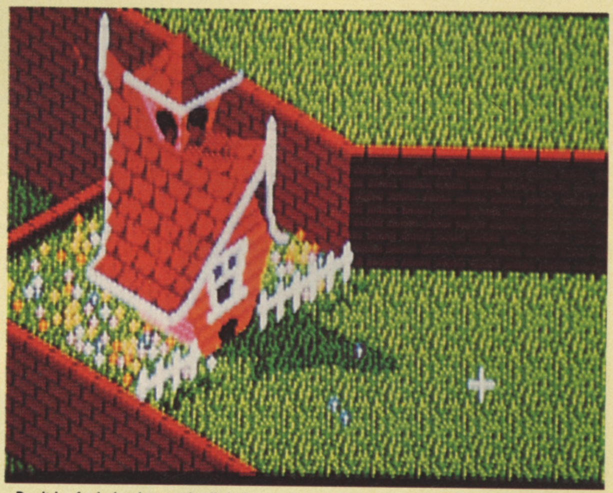
***Zany Golf* gives you the chance to relive the classic game of mini-golf in the comfort of your own living room, thanks to the talents of a bunch of Stanford University students from America, who call themselves Sandcastle...**

● GAMEPLAY

Zany Golf allows one to four players to compete in a nine-hole game of crazy golf, with the aim of the game being to complete all nine holes in par or better.

During play you get a preview of the forthcoming hole with some hints on how to conquer it. Then it's down to the golfing, where you select the angle and power of your shot using a cursor under mouse control – witnessing your triumph or disaster a second later.

If you're successful in putting the ball within the specified number of strokes, you'll get any unused strokes added to the stroke-count on the next hole. If you're unsuccessful, you'll be thrown out of the game with only a score card for consolation.



• Don't be fooled – that quaint little house is just part of the scenery

Each of the nine holes provides not only an increasingly difficult challenge, but also a weirder selection of obstacles. These range from a windmill to hamburger!

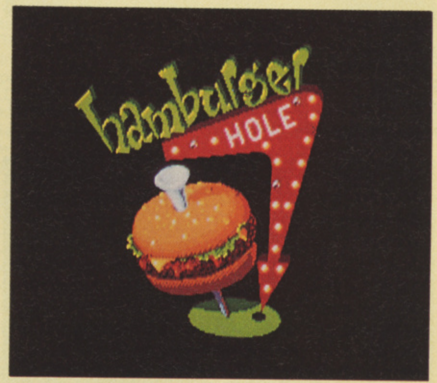
● GRAPHICS AND SOUND

Audio-visuals are nothing special in this game – they perform their assigned tasks in a purely functional fashion.

The visuals are competent enough, with a varied selection of obstacles and objects scattered around each of the nine holes. Audio is split between crass little tunes and sound spot-effects consisting of white-noise pings and pongs and the occasional jingle.

● OTHER VERSIONS

As *Zany Golf* doesn't rely on state-of-the-art audio-visuals, the game should play the same on the Amiga and PC. Expect a slight audio improvement on the Amiga, and the opposite on the PC.



• Coming up: Hamburger Hole (complete with ketchup)

● EXPRESS VERDICT

Zany Golf falls into the "cute" category of games. It breaks no new grounds in gameplay, audio or visual design techniques. Instead it just delivers a low-key – but fun – game, which should appeal to all age groups. It is far superior to Gremlin's *Mini-Golf* game.

A touch overpriced for what it offers, *Zany Golf* is a nice little release for anybody wanting a change from the ever increasing supply of violent games.

✪✪✪

Rik Haynes

ADVANCED SKI SIMULATOR

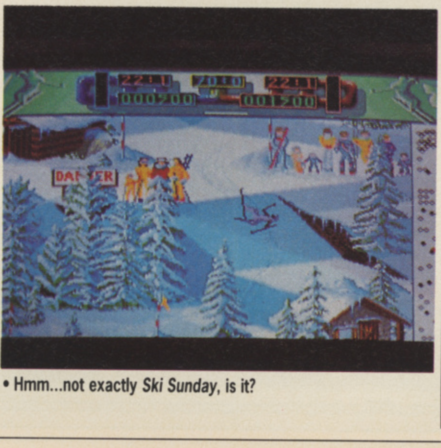
CODE MASTERS

Amiga • £19.99dk
ST version under development

Code Masters' latest simulator takes you to the high slopes for a spot of skiing. Does it live up to the blurb to be found on the packaging?

● GAMEPLAY

You can choose to play against a friend or the computer and compete against the clock on any seven Downhill ski runs. Control is by joystick, and is initially more than a little confusing, since its direction is reversed. You hold down the fire button to make your skier pick up speed and from then on it's a matter of repeatedly negotiating the courses until you master the runs.



• Hmm...not exactly *Ski Sunday*, is it?

● GRAPHICS AND SOUND

We can't really see the point in releasing a simulator that doesn't give you a subjective view of the action. You need to be able to directly see from the skier's point of view the obstacles to be overcome. Okay, so the Alpine scenery looks like Alpine scenery and the sounds of spectators sound like the sounds of spectators. But this is hardly the realism you'd expect from a simulator. Of better quality is the high scores screen, which is of a similar standard to the programmers' excellent demos on the C64.

● OTHER VERSIONS

A similar version of *ASS* is available on 8-bit format as a budget title called Professional Ski Simulator.

● EXPRESS VERDICT

Maybe someone ought to release a Simulator simulator, then at least Code Masters might start taking the term seriously.

Meanwhile, there's simply not enough here to make it worth spending the money on. Now if it were only £2.99...

✪✪

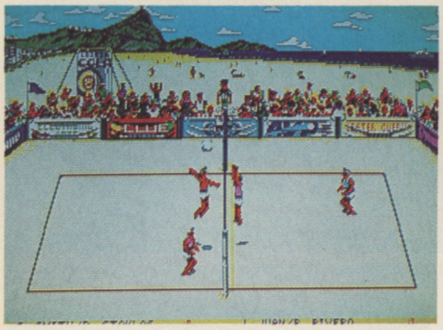
Andy Storer

Once a king, always a king

From the King of the Beach to the King of Chicago, Rik Haynes tells all

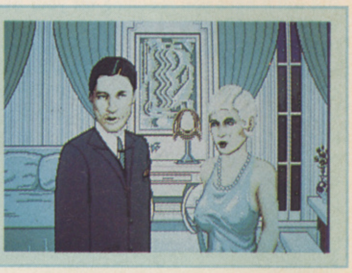
KING OF THE BEACH ELECTRONIC ARTS

Not, as you might expect, a game about windsurfer posers. This game allows any sporty PC owner to partake in a world tournament of professional beach volleyball. During play you'll have the chance to visit all the best beaches around the world, from Hawaii to Rio. Two players from one of the best real-life US beach volleyball teams, Sinjin Smith and Randy Stoklos, helped to design the game, so all the features of beach volleyball – such as spikes, bumps and sets – will be included. You'll be able to catch this slice of Americana in March.



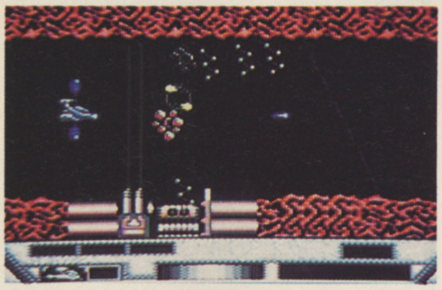
KING OF CHICAGO CINEMAWARE/MIRRORSOFT

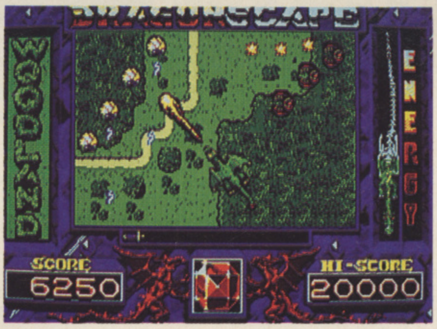
Already out on the Amiga and C64 since last year, *King of Chicago* is due to make an appearance on the ST shortly. Set in 1930's gangsterland Chicago, you play the part of Pinky Malone, a small-time hoodlum wanting to expand your empire to the whole of the Windy City. Success will depend on you using all of your various talents – violence, bribery and treachery,to name but a few. Amiga *King of Chicago* contained superbly atmospheric audio-visuals, and the ST version's looking just as good – so is Cinemaware making you an offer you can't refuse?



DNA WARRIOR ARTRONIC

Following the basic theme inspired by the Inner Space/Fantastic Voyage films, *DNA Warrior* throws you into a microsubmersible travelling through a scientist's bloodstream in an attempt to save his/her life using a touch of microsurgery. Taking on any blood cells, plasma or immune systems, you have to reach the scientist's implanted second brain in order to destroy it before it grows too large and kills him/her. *DNA Warrior* is a horizontally-scrolling shoot-em-up, scheduled for release later this month on Spectrum, C64, ST and Amiga formats.



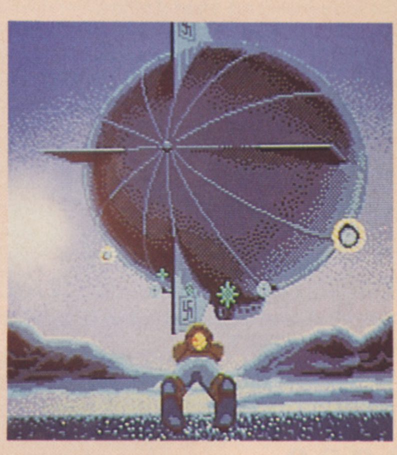


DRAGONSCAPE SOFTWARE HORIZONS

Together with your pet dragon, Garvan, you must rid the fair land of Tuvania from the evil curse of Kaos in this fantastical, multi-direction scrolling shoot-em-up. As you guide your dragon through the woodlands, icelands and wastelands of Tuvania you'll meet all sorts of horrible creatures, hazardous traps and harassing mazes. You'll have to seek out eight objects and place them in the right locations before you're able to visit the next section of the land. Out soon on ST, with the Amiga version following shortly after.

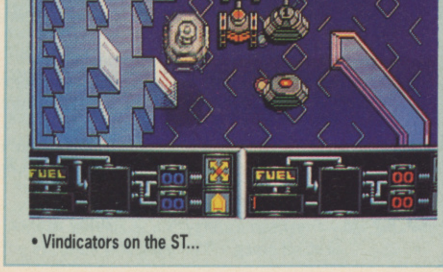
ROCKET RANGER
CINEMAWARE/MIRRORSOFT

It's back to the Saturday morning picture show at the cinema, as *Rocket Ranger* takes to the skies on the ST. The time is 1940, and the future's looking grim. It's a future which sees the Nazis win World War II and go on to rule the world. But help is at hand, thanks to a group of disgruntled non-Nazi scientists from the future sending you a rocket suit, a ray gun and a plan to foil the evil Nazi empire and save the world from Nazi oppression. Confused? You shouldn't be when you finally get to see the game some time in the Spring.

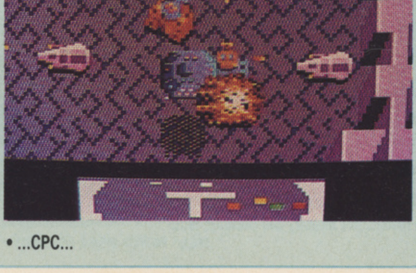


VINDICATORS DOMARK

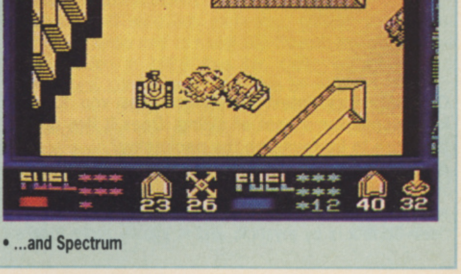
Vindicators is a conversion of the popular Atari coin-op – a one or two-player, eight-directional scrolling shoot-em-up. You're in control of a S-88 Strategic Battle Tank smashing your way through the invading forces of the Tangent Empire. If you manage to pick up Battle Stars during the action, you can purchase extra weaponry and powers, allowing you to upgrade your humble little tank into a major combat vehicle. But you have to keep an eye on your fuel consumption rate if you want to destroy the Tangent Empire's 14 space stations. Out around Easter time on Spectrum, C64, CPC, ST and Amiga, with a PC version following later.



• Vindicators on the ST...



• ...CPC...



• ...and Spectrum

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Times of Lore	15.99	15.99
Turbo Cup	12.99	12.99
TV Sports Football	--.--	19.99
UMS	15.99	15.99
Victory Road	12.99	15.99
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AMIGA

Baal	19.95	Imminent	Psygnosis/Psyclapse
Barbarian II	19.99	Feb/March	Palace
Billiards	19.95	Imminent	Ere/Infogrames
Cosmic Pirate	19.99	February	Outlaw
Crazy Cars II	24.99	End Feb	Titus
Custodian	19.99	Mid Feb	Hewson
Dark Fusion	19.99	February 7	Gremlin
Earl Weaver Commissioner's Disk	9.99	Late Feb	Electronic Arts
Galdregon's Domain	19.99	Imminent	Pandora
Gary Lineker's Hotshots	19.99	February 14	Gremlin
Incredible Shrinking Sphere	24.99	Imminent	Electric Dreams
Kennedy Approach	24.95	Imminent	Microprose
Neuromancer	24.95	Late Feb	Interplay/EA
Ringside	24.99	Mid Feb	E.A.S.
Shoot-Em-Up Construction Kit	24.99	February	Outlaw
Skateball	19.99	Late Feb	Ubi Soft
Teenage Queen	19.95	Out Now	Infogrames
Tiger Road	24.99	Early Feb	Capcom/U.S.Gold
TV Sports Football	29.99	Out Now	Cinemaware
War in Middle Earth	24.99	Mid Feb	Melbourne House
Zany Golf	24.95	Late Feb	Electronic Arts

AMSTRAD CPC

Airborne Ranger	D	19.95	Imminent	Microprose
Airborne Ranger	T	14.95	Imminent	Microprose
Barbarian II	D	14.99	February	Palace
Barbarian II	T	9.99	February	Palace
Chuck Yeager's Adv Flight Trainer	D	14.95	Late Feb	Electronic Arts
Chuck Yeager's Adv Flight Trainer	T	8.95	Late Feb	Electronic Arts
Crazy Cars II	D	14.99	Mid Feb	Titus
Crazy Cars II	T	9.99	Mid Feb	Titus
Dark Fusion	D	14.99	February 7	Gremlin
Dark Fusion	T	9.99	February 7	Gremlin
Gary Lineker's Hotshots	D	14.99	February 14	Gremlin
Gary Lineker's Hotshots	T	9.99	February 14	Gremlin
Graham Gooch	T	1.99	Imminent	Alternative
Incredible Shrinking Sphere	D	14.99	Imminent	Electric Dreams
Incredible Shrinking Sphere	T	9.99	Imminent	Electric Dreams
Street Gang	T	1.99	Imminent	Pandora
Super Snake Simulator	T	1.99	Imminent	Alternative
The Archon Collection	D	14.95	Out Now	Electronic Arts
War in Middle Earth	T	9.99	February	Melbourne House

SPECTRUM

Captain Blood	T	9.95	Imminent	Exxos
Dark Fusion	T	7.99	February 7	Gremlin
Emlyn Hughes International Soccer		T	9.95	Imminent Audiogenic
Fire & Forget	T	8.99	Out Now	Titus
Gary Lineker's Hotshots	T	7.99	February 14	Gremlin
Incredible Shrinking Sphere	T	9.99	Imminent	Electric
Dreams				
Puffy's Saga	T	8.99	Late Feb	Ubi Soft
Skate or Die	T	8.95	Late Feb	Electronic Arts
Street Gang	T	1.99	Imminent	Players
Super Snake Simulator	T	1.99	Imminent	Alternative
The Archon Collection	T	8.95	Out Now	Electronic Arts
War in Middle Earth	T	9.99	February	Melbourne
House				

BBC

Citadel	T	2.99	Out Now	CDS
Death Star	T	1.99	Out Now	CDS
Smash & Grab	T	1.99	Out Now	CDS
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COMMODORE 64/128

Action Service	D	14.95	Imminent	Cobra/Infogrames
Action Service	T	9.95	Imminent	Cobra/Infogrames
Barbarian II	D	12.99	Imminent	Palace
Dark Fusion	D	14.99	February 7	Gremlin
Dark Fusion	T	9.99	February 7	Gremlin
Final Frontier	D	17.99	Mid Feb	PSS
Final Frontier	T	12.99	Mid Feb	PSS
Firezone	D	17.99	Imminent	PSS
Firezone	T	12.99	Imminent	PSS
Fish!	D	19.99	Imminent	Rainbird
Gary Lineker's Hotshots	D	14.99	February 14	Gremlin
Gary Lineker's Hotshots	T	9.99	February 14	Gremlin
Grand Prix Circuit	D	14.95	Imminent	Accolade/EA
Grand Prix Circuit	T	9.95	Imminent	Accolade/EA
Hostages	D	14.95	Imminent	Infogrames
Hostages	T	9.95	Imminent	Infogrames
Incredible Shrinking Sphere	D	14.99	Imminent	Electric Dreams
Incredible Shrinking Sphere	T	9.99	Imminent	Electric Dreams
Iron Lord	D	19.99	Early Feb	Ubi Soft
Iron Lord	T	12.99	Early Feb	Ubi Soft
Modem Wars	D	14.95	Late Feb	Electronic Arts
Olympic Ski	T	1.99	Imminent	Alternative
Project Firestart	D	14.95	Imminent	Electronic Arts
Rik the Roadie	T	1.99	Imminent	Alternative
Rocket Ranger	D	14.99	Imminent	Cinemaware
Skateball	D	14.99	Late Feb	Ubi Soft
Skateball	T	9.99	Late Feb	Ubi Soft
Street Gang	T	1.99	Imminent	Players
Super Snake Simulator	T	1.99	Imminent	Alternative
T.K.O.	T	9.95	Imminent	Accolade/EA
Tomcat	T	1.99	Imminent	Players
War in Middle Earth	D	19.99	Mid Feb	Melbourne House
War in Middle Earth	T	9.99	Mid Feb	Melbourne House
Warlocks Quest	D	14.95	Early Feb	Ere/Infogrames
Warlocks Quest	T	9.95	Early Feb	Ere/Infogrames

ATARI ST

Andes Attack	9.95	Out Now	Llamasoft
B.A.T.	24.99	Late Feb	Ubi Soft
Barbarian II	19.99	Imminent	Palace
Billiards	19.95	Imminent	Ere/Infogrames
Bismarck	24.99	Out Now	PSS
Chaos Strikes Back	14.99	Mid Feb	Mirrorsoft/FTL
Cosmic Pirate	19.99	February	Outlaw
Custodian	19.99	Mid Feb	Hewson
Dark Fusion	19.99	February 7	Gremlin
Dragonscape	19.95	February 16	Software Horizons
F-16 Combat Pilot	24.95	Early Feb	Digital Integration
Federation Of Free Traders	29.99	Imminent	Gremlin
Final Command	24.99	Late Feb	Ubi Soft
Fusion	24.95	Late Feb	Electronic Arts
Galdregon's Domain	19.99	Imminent	Pandora
Gary Lineker's Hotshots	19.99	February 14	Gremlin
Gridrunner	9.95	Early March	Llamasoft
Incredible Shrinking Sphere	19.99	Imminent	Electric Dreams
Iron Lord	24.99	Early Feb	Ubi Soft
Joan Of Arc	19.99	Out Now	U.S.Gold
Orbiter	24.99	Imminent	Mirrorsoft
Ringside	24.99	Mid Feb	E.A.S.
Skateball	19.99	Late Feb	Ubi Soft
Skyfox II	24.95	Late Feb	Electronic Arts
Teenage Queen	19.95	Out Now	Infogrames
Tiger Road	19.99	Early Feb	Capcom/U.S.Gold
War in Middle Earth	24.99	Mid Feb	Melbourne House
Zany Golf	24.95	Imminent	Electronic Arts

SPECTRUM+3

Barbarian II	D	14.99	Imminent	Palace
Captain Blood	D	14.95	Imminent	Exxos
Dark Fusion	D	12.99	February 7	Gremlin
Emlyn Hughes International Soccer	D	14.95	Imminent	Audiogenic
Fish!	D	15.99	Imminent	Rainbird
Gary Lineker's Hotshots	D	12.99	February 14	Gremlin
Mini-Putt	D	14.95	Imminent	Accolade/EA
Puffy's Saga	D	14.99	Late Feb	Ubi Soft
Skate or Die	D	14.95	Late Feb	Electronic Arts
Spitting Image	D	14.95	Out Now	Domark
Trivial Pursuit	D	19.95	Out Now	Domark

AMSTRAD PCW

Fish!		24.99	Imminent	Rainbird

ARCHIMEDES

Fish!		24.99	Imminent	Rainbird

ELECTRON

Graham Gooch	T	1.99	Imminent	Alternative

MACINTOSH

Fish!		34.99	February	Rainbird

MSX

Who Dares Wins II	T	1.99	Imminent	Alternative

IBM & COMPATIBLES

Abrams Battle Tank	3.5+5.25	24.99	February 15	Electronic Arts
Crazy Cars II	5.25	24.99	End Feb	Titus
F-16 Combat Pilot	5.25	24.95	Imminent	Digital Integration
Fast Break	5.25	24.95	Imminent	Accolade/EA
Final Frontier	3.5+5.25	24.99	Mid Feb	PSS
Firezone	5.25	24.99	Imminent	PSS
Modem Wars	3.5+5.25	24.95	Late Feb	Electronic Arts
Offshore Warrior	5.25	24.99	Out Now	Titus
Puffy's Saga	3.5	19.99	Late Feb	Ubi Soft
Puffy's Saga	5.25	19.99	Late Feb	Ubi Soft
Skateball	3.5	19.99	Late Feb	Ubi Soft
Skateball	5.25	19.99	Late Feb	Ubi Soft
Speedball	3.5+5.25	24.99	Out Now	Image Works
T.K.O.	5.25	24.95	Late Feb	Accolade/EA
Times of Lore	5.25	24.95	Early Feb	Microprose
War in Middle Earth	5.25	24.99	Mid Feb	Melbourne House
Wasteland	3.5+5.25	24.95	February 1	Electronic Arts

Out Now = Released within the last month
Imminent = Expected at time of publication

The Release Schedule is a reference guide to new and forthcoming products. Dates given are expected release dates and will be adjusted weekly. Please allow for slippage. Compiled by Software Information Services, a department of Inter-Mediates Ltd.

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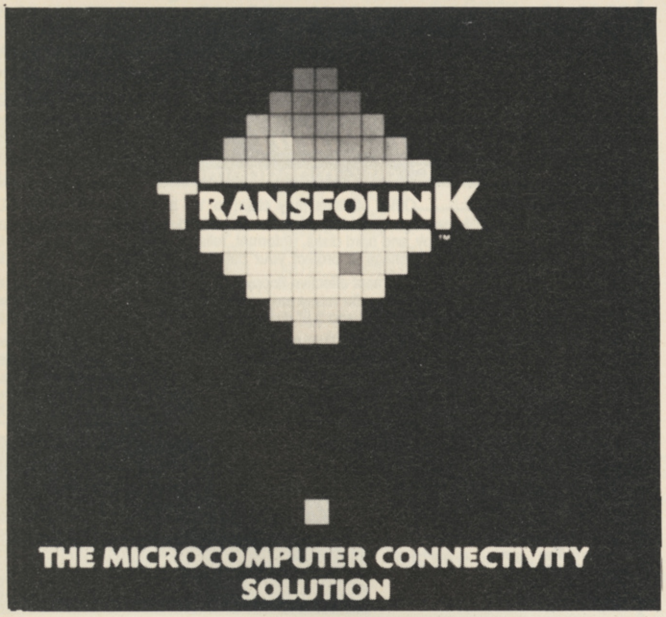
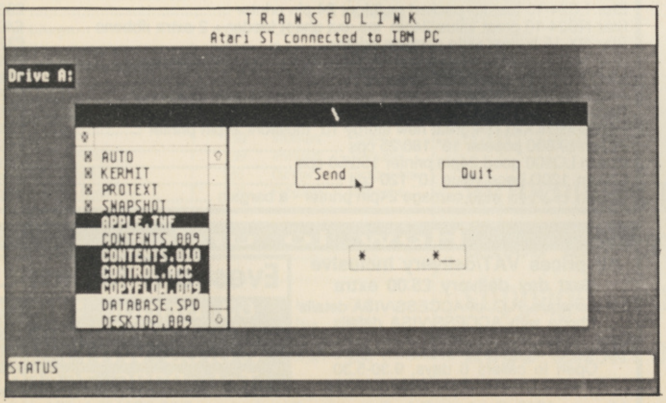
A constant source of amazement to first-time computer users is the insularity of the various formats. A computer's a computer, innit? But however hard you press that PC floppy, it just won't fit into an ST drive. And even if the disk sizes are the same, you won't be able to read on your Amiga what you wrote on your PPC. So what if you have two or more machines in your office or bedroom and want to move stuff from this computer to that computer?





There are various different ways round this and transfer programs are available between some of the various formats. And it's quite possible for anyone who knows what they're doing to cable machines together and somehow shunt files across machines. But Silicon Croft's solution is definitely on the Grand Scale. A briefcase pack contains everything you need to transfer a file from one machine to another, cables, software, manual and all. With this kit you can transfer from PPC to ST, ST to PC, PC to BBC and so on in any combination. And they're planning to extend the range further, to cover all reasonable transfer requirements you could have.

The central theme of the idea is one small plastic interface with two female sockets. Add to that a set of cables which connect each machine to one of these sockets and you have a data transfer system that can go anywhere and do anything – and is expandable in that any other format can be added later on, just by getting the right cable to link the new machine to the interface and the right software. You get a disk for the ST, BBC and both formats of PC (5.25 and 3.5 inch) and the transfer programs look the same and work in the same way on each machine.

Tlink before you act

Suppose you're transferring that file REPORT.TXT from a ST to a PC. You boot up both machines as usual and insert the appropriate disks in each, put the supplied PC cable on the PC and the ST cable on the ST, then put them both in the connecting unit. Then it's just a case of typing TLINK at either end (or clicking on the file TLINK). The standard screen appears and you select one or more files you wish to transfer on the ST or whichever machine (the ones selected reverse out on the directory) and click on 'send'. If the file transferred exists on the second machine you are warned and can rename or overwrite.

And that's all there is to it. No worrying about baud rates, protocols, handshaking, parity or any of that nonsense, or even how the operating systems of each machine work: if you can do it on one you can do it on any other.

The pack comes in a smart plastic briefcase which however seems cavernous compared to the size of its contents: a few cables, four disks and a personal organiser-compatible manual. The manual is clear and contains plenty of screen shot mock-ups.

Silicon Croft say that several additions to the pack, available individually, are on the way. Macintosh cable and software are said to be 'out soon' while they're considering adding the Nimbus, Amiga and Z88 (with EPROM) to the list.

Transfolink isn't cheap and the goodies like the case and Filofax-style manual look just a wee bit gimmicky, but when you think that many similar setups dedicated to linking just two machines cost about as much, it begins to make sense. Anyway, if you run the sort of concern where BBCs/ PCs/ STs are all over the place then the money will probably come out of petty cash.

HIGHLIGHTS
- Dead easy to use
- Potentially expandable system
- Pleasant packaging

DRAWBACKS
- If you only ever transfer between two machines, cheaper alternatives exist

✪ ✪ ✪

What you can transfer

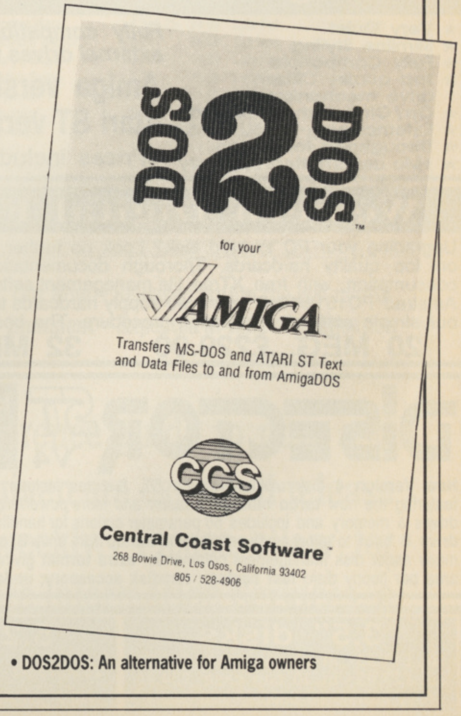
As always, you're restricted to plain text files – word processor or database files for example must be converted to plain text beforehand (unless you happen to have the same program on each machine, such as *Protext*).

GEM files may be transferrable between an ST and PC. But any more complex data such as graphics files for desktop publishers will be out, unless you can knock up or find conversion programs from somewhere.

The alternatives

There are other ways of transferring data. For example, an ST can read certain formats of 3.5 inch PC disk and vice-versa; you could then do data transfer for nothing, though this doesn't work as a general rule for any old PC disk.

A software solution for Amiga owners lies in *DOS2DOS*, about £30 from Central Coast Software in the US (268 Bowie Drive, Los Osos, Ca. 93402). This program, on a 3.5 inch disk, can format, read or write to 5.25 or 3.5 inch MSDOS disks and 3.5 inch ST disks. So long as you have an Amiga, you can then read or write data on your 3.5 inch PC disk or ST disc – and hence use the Amiga as a go-between to transfer stuff from PC to ST disc.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- **DOS2DOS: An alternative for Amiga owners**

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TECH TIPS

HELP!

CLImbing up the wall

I have an Amiga 500 and external disk drive which I have only had for a few months. My problem is that I cannot format disks through the CLI, or anything else through the CLI. Could you help because I'm tearing my hair out.

Also, I know how to print main directories (with DIR >PRT:) but my problem is how to print the sub-directories. Could you also say where I can get *Workbench 1.3* because every place I've tried say they haven't had any copies.

BUG OF THE WEEK

Otherwise delighted users of *Protext* (versions 4.10 and 4.11) on the Amiga 500 will be less than delighted if their machine crashes irreversibly after 3 hours and six thousand words of unrepeatable prose. But that's just what can happen if you don't save regularly.

The problem lies with the limited available memory of the A500 once *Protext* has loaded. Instead of warning you as you work that you're running out of RAM (where the temporary text files are stored), when that fateful moment arrives the whole lot locks solid.

***Carabus problematicus* (20-30mm) • This creature has dark elytra with fine longitudinal ribbing, and is to be found from June to September. It is generally the commonest *Carabus* on heaths and moors in Britain.**

Finally, I have a friend going over to the USA for his holidays and he has offered to get some games for me over there as they are cheaper than in the UK. What I want to know is, are they compatible with British systems?

Patrick Downes, Rhydyfelin, Pontypridd

• Suppose you want to format a disk called MyDisk in your external drive (DF1:). The syntax for the command from the CLI is:

```
FORMAT DRIVE DF1: NAME "MyDisk"
```

To list of all files on your disks use

```
DIR OPT A
```

where the OPT A parameter tells AmigaDOS to show all files on the disk. To get a listing for specific sub-directories on your disk you simply name the sub-directory. So to get a directory of the c directory type

```
DIR c
```

You can get more complete information on the files on your disk by using the LIST command.

Commodore did itself no favours with the long-awaited *Workbench 1.3* but it should be in the shops now so see your local dealer. The price should be £14.95 for a three-disk pack including manual.

For more information on AmigaDOS you should try one of three books: *The AmigaDOS Manual*, £22.95 from Bantam; *AmigaDOS Reference Guide*, £14.95 from Compute!; or *AmigaDOS – Inside and Out*, £14.95 from Abacus.

American software is completely compatible with UK Amigas, but that isn't really the question. You'll find that games software in the US is no cheaper than in the UK with average prices between $40 and $50 – about £25. Of course you can get them cheaper from large mail-order operations but that's true for this country too.

In addition, if your friend buys very much in the US he'll be liable for import duty and VAT when he returns home.

There are two good reasons for buying in the US. One is to go for applications software which can be much cheaper than in Britain, often as much as 40% cheaper. The other is that as long as your friend has time to shop around, he should be able to find quite a bit of stuff that hasn't been released in the UK yet and probably won't be for some time.

HELP!

Relic revival

I have been given an old computer, printer and some cassette programs, all with the relevant instruction books and all in good order.

Having spent some time with the machine and having read *New Computer Express*, I realise that I own a museum piece. However, I feel sure that the computer is capable of doing what I require of it – using it like a typewriter – but I don't know how.

Perhaps you could give me some advice about what to ask for and where to buy it. The computer is a Sharp MZ-700.

Arthur Hilditch, Bacup, Lancs

• The Sharp series never was much of a success story in the personal computer market although it was pretty good for its day (about five years ago). It had a lot in common with the Commodore Pet – built-in cassette recorder, near-enough identical block character set.

What you want is a word processing program and there's at least a chance that you'll be able to get hold of some suitable software. Unfortunately, Arthur, you're not going to be able to walk into a shop and buy it.

Your best bet is to get in touch with the Sharp User Group, which you'll find at **11 Harcourt Close, Henley on Thames, Oxon RG9 1UZ**.

HELP!

Feeding a line

I have an Ibico printer, an inexpensive daisywheel machine that seems to have disappeared from the UK market.

It does not have dip switches so line-feeds are obtained from a computer command. When I used it with a Spectrum I entered the line COPY: REM/1 before loading an applications program and LF was sent with each CR.

Do you know if such a command line exists for the Commodore 64? I am trying to use *Mini Office* but do not obtain any line-feeds.

L Thomas, Sittingbourne, Kent

• This is one of those tricky questions because there are just so many variables.

The LF/CR problem is a common one and arises because so much of the current printer technology was, in fact, lifted from old teletype/typewriter standards.

On a typewriter, when you hit the return bar you push the carriage so that the print position returns to the left-hand margin. This is a carriage return. But you also activate a gearing system that advances the paper one line. This is a line-feed. So on manual typewriters whenever you do a carriage return you get a line-feed as well.

On computer printers you don't. Because computers are literal-minded morons, when you ask for a carriage return that's what you get, and everything gets printed on one line. If you ask for a line-feed, that's all you get and the print-head never returns to the beginning of the line.

Some printer manufacturers and software publishers recognised the problems and began to provide ways around it but this only added to the confusion. Now some software assumes that your printer will automatically add a line-feed (LF) to any carriage returns (CR), other programs allow you the option of choosing, and most printers also give you the option with some form of setting – usually a dip switch.

Since you managed to get proper CR/LF controls with your Spectrum, there are two possibilities: one is that the Ibico can be preset by sending the correct control code, as the COPY: REM/1 command suggests; the second is that it was your Spectrum software that was handling the problem and the COPY command had nothing to do with it.

So there are two possible solutions with the Commodore 64. First, check *Mini Office* and see whether there is a set-up program that allows you to specify either CR or CR/LF control. Second, check your printer manual and find out what the codes are to preset the printer. On most printers such codes take the form of escape sequences – that is, a CHR$(27) followed by one or more characters and codes. The code can be sent to the printer by the C64 using a Basic program before you load *Mini Office*. See your C64 manual for the way to drive a printer from Basic.

If your printer manual is no help in providing the codes, you can try some detective work from the Spectrum side of things. The command COPY: REM/1 probably sends three bytes to the printer: the token for the REM statement, the "/" character, and the number 1. If you can find out the value of the REM token and the "/" character, you're laughing.

TIP

Guru grounded

Those who program in C or assembler will know all about the Guru, and his ability to pop up at the worst possible moment.

However, there is a way to knobble him, one that gives you the chance to save the contents of your RAM disk onto a floppy.

The answer is to keep at least two CLI windows open all the time. When the Guru throws a spanner in the works he nevertheless has control over only the window containing the guilty program.

All you have to do now is select the surviving CLI window and save the contents of the RAM disk.

HELP!

Amiga art

I want to produce advertising on my Amiga 500. For example, I need a program that allows you to type in the text and then make it scroll, expand and do other weird and wonderful effects.

What package could you recommend?

Alan O'Flaherty, Wicklow, Ireland

• Well, you've got the right computer for it, but not even the Amiga can make the process as simple as you make it sound.

Any animation process is a fairly complex sequence of creating and positioning an image, storing it, moving it, storing the new display, and so on. Where the Amiga does help is in automatically creating the illusion of movement between one position and the next – a process known as tweening.

Some packages will do complete animations given a start and end point but these are simple transformations and are unlikely to look very impressive.

There's another point to consider too: this sort of job is very demanding of memory and processor time, so you should allow for expanding your Amiga's ☞

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memory at least to 1Mb and preferably more, and adding an external disk drive if you don't already have one. A hard disk would make a big difference too. And be patient: a fairly simple animation of ten seconds running time might easily take ten hours or more to process, not counting your own time in creating the various images.

So far as software goes, there are several families of products but a good starting point might be Electronic Arts' *Deluxe* series. *Deluxe Paint II* is a good all-round tool for creating images, and *Deluxe Video* allows you to create animations and titles with a variety of special effects. They'll cost about £50 each.

TIP
CP/M shortcuts

There are a number of functions hidden in the various keys under CP/M on a PCW. For example, the function key [f5] temporarily halts whatever is going on – a listing in BASIC, your database printing records to screen or whatever. [f3] will resume the operation.

If you need to stop a program and this doesn't work try pressing [PTR] – particularly useful for games like *Tetris* when you want to pause for breath! [EXIT] resumes.

Another useful one to remember is [COPY] which recalls the last command typed in.

If, for example, you type PIP INTRSTNG.DOC=RIVETING.TXT and realise after pressing [RETURN] that RIVETING.TXT is actually on B, you just press [COPY] and then edit the command line which re-appears so it includes the B.

TIP ST shot to pieces?

Has your ST has suddenly started playing up for no apparent reason? Does it refuse to drop menus? Ignore keyboard inputs? Fail to load files correctly?

Before chucking the whole lot into the bin, check first that you haven't got an autofire joystick plugged in. These devices may be great for trashing aliens, but unfortunately they have the same effect on your computer. It receives so much rapid input from that it has trouble coping with any other inputs properly.

Jamie Williams, Grays, Essex

HELP!
What micro?

I am about to take the plunge and buy my first computer, but I'm not even sure which type of computer I should be looking at, let alone what make.

Its main use would be for storing info and typing up material from it. But it has got to be useful to the family, particularly our son who obviously will want it for games as well as serious work.

Our local computer shop suggested I buy an Amstrad PCW for myself and one of the Sinclairs simply as a games machine. This looks like an attractive suggestion since that way I've got a monitor and printer straight away, as well as a second machine, and all at a reasonable cost.

An Atari ST, monitor and printer would cost considerably more but, presumably, the PCW would be very limited compared with the ST.

Any comments you might have would be much appreciated.

Neil McAdam, Middle Barton, Oxon

• Several things spring to mind. The first is that buying a Spectrum as a dedicated games machine makes no sense at all. For an extra £10 or so you could get a Commodore 64 which is a far better system, or (and I never thought I'd recommend this) something like a Sega games console which is cheaper than either – although the software is more expensive.

There's also the question of the PCW. Until last year the PCW made sense as a low-cost, all-in-one system for the small business or for professional use at home, but as the price of PC-compatible machines has fallen the PCW has looked less and less attractive.

The main advantage of a PC-compatible is that you have a guaranteed upgrade path (provided you don't buy either the Amstrad PC1512 or 1640) as your requirements grow. That certainly isn't the case with the PCW.

However, all of that pre-supposes the idea that you need two systems. Only you can decide that, but if you and your son can reach an amicable arrangement over sharing the machine you'd be far better off going for a single computer.

There are two possibilities, and which you choose depends on how you determine your priorities.

For "serious use with some gaming", a PC-compatible with monitor will cost anything from £500 to £700, depending on which make and whether you go for a single- or double-drive model, and mono or colour monitor.

For "general home use including games with some serious applications" an Atari ST with colour monitor will cost about £550 while an Amiga 500 with colour monitor will cost about £600.

There are several good quality dot-matrix printers on the market for £150 or slightly less, so your choice looks like this:

- Around £650 for the PCW and a dedicated games machine
- Around £750 for a PC-compatible, printer and games machine
- Around £700 for an Atari ST with monitor and printer
- Around £750 for an Amiga 500 with monitor and printer
- Around £800 for a PC-compatible with printer

TIP
Echo echo

When writing a batch file under MS-DOS one often wishes to introduce blank lines for the purposes of clarity in the screen display. However, if you attempt to do this by using the command ECHO then the echo status is returned in the message ECHO ON or ECHO OFF, which can be distracting.

The solution is to put ECHO followed by a full stop. This outputs a blank line to the display without displaying the echo status.

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ST CLUB

Multi-trashing micro

In Stephen Daniels' Tech Tip in issue 9, he mentioned that if you want to move several files around on the desktop, you should just click on the first one as normal, then hold down SHIFT while you click on the other files, which can then be moved together in one large batch.

Don't forget, though, that you can also select a group of files by rubber-banding them: put the mouse pointer at the top left of the first file you want to select, then hold the left button down and move the pointer to the bottom right of the last file and release the rodent.

The advantage of Stephen's method seems at first to be that the files chosen don't have to be physically together on the screen. Keep the SHIFT key down and you can select, for example, all but the middle file of a long list. But rubber-banding allows this too. Draw a box round the whole list, the press SHIFT and click on the file(s) you don't want to deselect them.

This multi-file method is a speedy way of clearing a disk by dragging all the files together into the trash can. Quicker and better than re-formatting, as you're only in effect deleting the directory – you may wish later that you hadn't done it, and this then gives you a chance of recovering the data using one of the PD UNDELETE programs.

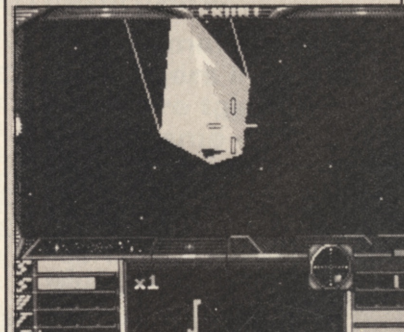
The Mad Mueller

When he's not using his ST to help him run the Adventurers Club and dash off epistles to the Express letters page demanding an adventure column (hear, hear!), Henry Mueller spends his time trying to thrash Thargoids in Elite. He's offered this tip:

"At about 460,000 points mission number five is offered to the player, which involves destroying the space station of a nearby planetary system that has been taken over by Thargoids. The reward, incidentally, is a useful ECM jammer, which prevents attacking ships from using their own ECM system to destroy missiles fired at them. But there is a bug in earlier ST versions that will not allow the player to complete mission five, and instead creates an endless loop in which the Thargoids take over the 2,500 planets of the entire eight galaxies!

Version 1.3 is the one in which this major bug has been created, so all Elite players should check their version of the game before they get so far into it and then can't progress any further. To check the version number, press the 'W' key when you are not docked. The 'W' feature, incidentally, is not documented anywhere in the manual/instructions, and also allows the player to find his score."

Thank you, Henry, for that tip. And next time the **Adventurers Club** ***dossier is late coming out, you'll know why.***



The other ST Club

I was banging on the other week about machines like the ST bringing power to the people, with the opportunities it brings for self-publishing and all the rest of it, and this was before I saw the output of an organisation called *The ST Club* – a name which has a familiar ring to it.

For starters, it's a PD library, and there's nothing unusual about that, although their latest catalogue runs to 789 disks, which is pretty comprehensive. Single-sided disks are £2.70, double-sided £3.20, both less ten per cent if you're in the club, so to speak.

To join costs £8, and for that you get 12 issue of *The ST Club Newsletter*. Yet to call it a newsletter shows a terrific amount of modesty on their part, as this monthly publication currently runs to 28 A4 pages. It's prepared using *Publishing Partner* on a Mega ST-4 and printed out on the Atari laser printer. It really is packed with information, with more concentration on the serious side of the ST, although games are far from ignored. It also includes a regular round-up of local user groups – and revealed to me that there's one in my own area, which I was totally unaware of despite living here for several months and reading all the local papers fairly regularly. A word of advice to club organisers, then: advertise your existence!

The most impressive publication that the *ST Club* has put out, though, has to be *Your Second Manual* to the Atari ST by Andreas Ramos. Produced on the same set-up as the newsletter, this is 104 A4 pages and as its title tells you is meant to be the next thing you read after the official Atari manual – which, as we all know, just about tells you how to plug the various bits of your computer together.

The author's style is idiosyncratic, to say the least, and newcomers to computing may not want an in-depth study of the history of Atari and Jack Tramiel, but otherwise the book is absolutely full of helpful information. Ramos says, just as one example, that you should tidy up your much-used disks from time to time to speed up access. Move all the files onto a RAM disk, clear the first (provided you've got a backup, of course!) and then simply move them all back again. That helps TOS distribute the data more logically on the disk. There's also a very useful glossary of techno-terms, though the book could do with an index.

A very big plus-point of the book is the price. It costs just £3.95, and even that low price includes £6.70-worth of vouchers that you can spend on other *ST Club* goods. This is what self-publishing (as opposed to vanity publishing) is all about. I hope every ST owner in the country buys it. The address of the *ST Club* is c/o Simple Logic, 49 Stoney Street, Nottingham NG1 1LX.

Mike Gerrard

PC UPDATE

Power to the people

About a year ago I went to interview the MD and Technical Manager of Digital Research in the UK. Both have since moved on, but at the time were keen to get over the fact that the new version of GEM, probably its best known product after CP/M, would be able to use Bitstream fonts. This effectively meant that people running GEM with a laser printer could make use of high quality 300dpi fonts in whatever size they wanted (up to the limits imposed by the laser). Earlier versions of the graphics environment had used bit-image fonts which aren't as good, though non-laser users will know that they are not bad, either.

Reasons for not using a XXXX

I wouldn't buy a Compaq 386 (even if it was half the price) as the only time I used one I cut a slice out of a finger on its pressed-steel chassis when trying to fit an expansion card.

If you have any off-beam reasons for avoiding, or choosing, a particular micro, write to PC Update, New Computer Express, 4 Queen Street, Bath BA1 1EJ.

What the DR men failed to mention was that you still only get two typefaces, Swiss and Dutch, which approximate to Helvetica and Times Roman respectively. With about 40 faces in the Bitstream range, you can add any of them to your GEM library, assuming you have the disk space to hold them, the memory in your laser and the money.

Each Bitstream typeface costs £195. Considering the price band of GEM products, which has always seemed very reasonable, this continues to look high. It's all very well to say "if you can afford a laser and a hard disk, you can afford £200 for a new font and a Dire Straits album," but let's campaign for Everyman and say that the ability to reproduce respectable documents should be progressively dragged within the chequebook range of all.

GEM DTP Release 2

While I'm on about *GEM DTP* (neat link, huh?), *Release* 2 of the program recently landed on my desk and I've been poring over the contents.

The first thing you notice is that many of the dodos have been removed. Like not be able to enter text into a freshly opened text box, for instance.

Who in their right mind would design a system for page make-up where you can't enter a headline or a cross-head, but must have written it beforehand in a word processor and loaded the file into the DTP? Perhaps the "feature" was designed to encourage a forward-thinking approach?

Anyway, it's gone in *Release 2* and new features have been added to draw it more in line with the other main GEM-based DTPs, *Xerox Ventura Publisher* and *Timeworks DTP*. If you plonk a graphics box down on top of a text box, the text automatically reflows around the graphics. The program can alter the tracking of text to fit columns more exactly, handle colour, but only with a colour printer, and hyphenate text automatically, even if it's in Portuguese.

So is there anything left to joke about? Weeell, there is just the small point that a *GEM DTP* document only exists over as many pages as you've called onto the screen. Even if you're using an absolutely standard page layout for your document, and have enough text in tagged text files to fill it, you'll only get as many pages as you've paged down to. This may be acceptable in a 10 page report, but it's going to be a pain when preparing a 200 page manual!

GEM Desktop Publisher
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Your local directory

If you go about creating new directories a lot, as with the statement:

MD PLOD

to create a new one called PLOD, then it's best to create it from the directory immediately above the new one. Try and avoid creating a directory through a path, such as:

MD A:\NODDY\PLOD

It seems possible that this kind of command, particularly in MS-DOS versions 3.2 and below can cause problems with hard disks, even to the point of corruption of the directory tree.

Out on a LIM

If you run any major applications, like *Lotus 1-2-3* or *dBase IV*, then you'll probably be crying out for extended memory to create larger sheets or compile larger programs. There are plenty of other programs which now make use of LIM standard expanded memory, otherwise known as EMS. The snag is that a megabyte of LIM is likely to cost you £70 for the expansion card (with no RAM in it) and anything up to £300 for the memory chips.

If this is your kind of worry, then you presumably already have a hard disk on your PC. If so, why not use a section of this as the EMS memory you crave. There are now at least three utilities I've heard of which will allocate a section of your hard disk as EMS and tell applications about it. Although it is obviously slower than working with memory, and there is an overhead in main memory for the software that performs the trick (between 64K and 120K), it's still a lot cheaper than buying the EMS.

Full details haven't reached me yet, but what I have are the names *QEMS*, from Quarterdeck (that produces *DesqView*), though its only works with 80386 PCs, VEM, from among others the Ctrl Alt Deli (0908 662759), and *SoftByte* from Vericomp.

A copy of this last utility landed on my desk recently, but I know not from whence. Anyone know a supplier for it?

Simon Williams

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AMIGA BLIT

Workbench 1.5!

While some of us are still waiting for Commodore to start "officially" shipping *Workbench 1.3*, Commodore unveiled its plans for the proposed *Kickstart* and *Workbench 1.5* to the select few you could actually afford to jet across to the recent Amiga Developers Conference in Frankfurt, Germany.

"But what happened to *1.4*?", I hear you cry. Well, the good news is that *1.4* is under development as we speak, although the specification is far from complete. The bad news is that *1.4* won't be with us for a considerable amount of time (1990 at least!) and as for *1.5*, it's best not to even attempt to name an arrival date for that.

Details of *Kickstart* and *Workbench 1.4* are still vague and details of *1.5* are almost non-existent. However, in Frankfurt some details were unveiled. Firstly, *1.5* will feature a major overhaul of Intuition, the Amiga's windowing system. This will involve bug killing, code optimisation and even possible additions to the system (we can but hope!). Other enhancements include a complete overhaul of how the system handles fonts.

Unfortunately, that is all that's known about *1.5*, but the informed opinion is that Commodore is planning considerable enhancements to the Amiga operating system. The main restriction imposed on Commodore's system programmers appears to be memory – or, to be more precise, the lack of it.

An interesting aside to this is that Commodore has surprisingly announced that the new super Amiga, the A2500, will include *Workbench 1.4*. By simply putting two and two together (and getting five?), it's quite obvious that we've still got along time to wait before that machine finally reaches the hands of the general public – and a certain excited computer journalist.

Further conference news and an in-depth look at *Kickstart* and *Workbench 1.4* in next week's *AmigaBLIT*. Hang in there....

What ever happened to....

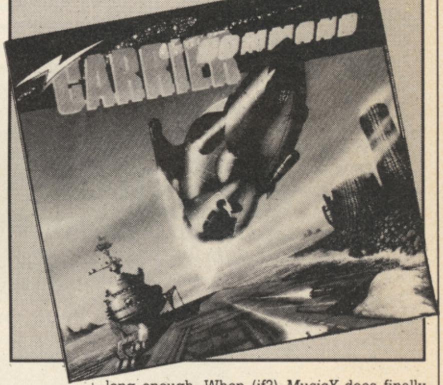
Yes, it could only happen in the computer industry. Have you ever looked back at computer magazines that are over a year old, seen an advertisement for a product and thought to yourself, "Whatever happened to that?". It seems ridiculous for a company to pour thousands of pounds into advertising, send out a constant stream of press releases and then for nothing to actually materialise. For example, what ever happened to......

- **The Amiga Ranger:** Crikey, this really is going back a bit!. Those of you who bought Amiga A1000s (fine machine, I owned one myself) will probably remember reading about this so-called super Amiga about three years ago. The machine boasted an impressive specification: 68020, a 25 Mhz clock speed, Sprite magnification in hardware and a whole host of other wonderful features. It seems that the machine was dropped in favour of the current A2000.
- **Amiga Gauntlet:** OK US Gold, you advertised the damned thing for months but nothing ever came of it. What do you intend doing about it? Oh, you're going to release *Gauntlet 2*? Seems logical...
- **The Amiga ParSec board:** Elmtech Research promised both ST and Amiga owners an add-on that would give our machines the graphic capabilities of a Quantel Paintbox. The board boasted a resolution of 1,024 x 1,024 pixels with 16 million colours, all this driven by a mighty 32-bit processor running at a staggering 40 Mhz.
- **MicroIllusions' MusicX:** Come on Activision/Mediagenic (delete as appropriate), Amiga MIDI musicians have been waiting long enough. When (if?) *MusicX* does finally arrive, I promise to stop seeing Doctor Tobenfeld in favour of a package that looks set to give Steinberg's *Pro-24* a run for its money. A note – no, a plea – to Mediagenic. Don't forget to include Step Time score editing will you!

Conquering Carrier Command

I don't know, what would I do without you lot? All this programming, DTP and MIDI sequencing (yes, I use an Amiga not an Atari for sequencing!) has started to take its toll on my gameplaying skills. Coming to my rescue this week is Darren Griffiths from Trowbridge in Wiltshire, who sent me the following cheat for Rainbird's highly regarded Carrier Command.

This cheat exposes a feature that the programmers at Realtime never told you about; a hidden cheat mode that will allow you to make all your Mantas and AAVs immune to enemy missiles. To access it, start an action game and then press pause straight away. Now type THE BEST IS YET TO BE (include a single space between each word) and the words, "Cheat Mode Active" will appear. Now all that remains is to press the "+" key on the numeric keypad and you're away!



GFA Compiler latest

Ok, so you've read the review, seen the advert, written out the cheque and even as we speak, *GFA BASIC Version 3* is winging its merry way towards your expectant mitts. "But what about the compiler thingy?", I hear you ask.

I recently phoned MicroDeal to inquire as to when an Amiga *GFA* compiler will be available. I was helpfully assured that the compiler will be along in around three months time. And the price? Currently not known, but it is expected to be approximately the same price as the interpreter.

It seems to me that the absence of a compiler is the only thing preventing *GFA BASIC* from being a worthy contender in the battle of the BASICs (well, the bugs don't help matters either!), so MicroDeal may be well advised to get that product out as soon as possible.

Jason Holborn

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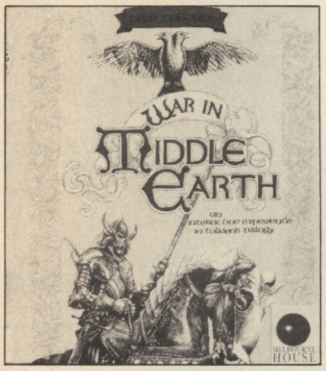
SPEX

Hobbit-forming

The thing I've been playing non-stop all week, with only momentary breaks to eat, drink, sleep and perform other necessary bodily functions, is *War in Middle Earth*, the fourth Tolkein-related game to be transferred to the small screen. It brought back memories of the first program ever to have the dubious honour of being loaded into my rubber-keyed friend; *The Hobbit*.

Strangely enough, over all the years I have been with my Spectrum this ancient adventure has deprived me of more sleep than most of the stuff which followed. After some four years of play, not continuous, I hasten to add, I still haven't come in sight of Smaug the dragon and his infamous bad breath problems. An embarrassing admission, which hopefully you'll keep to yourselves.



Money money money

That deep, philosophical phrase "funny old game, innit?" fits the pricing level of Spectrum games perfectly. Last year, every industry pundit seemed to predict the gradual demise of Speccy software daring to be priced higher than £2.99. This was thought likely to come about as older owners defected to 16-bit machines (traitors!) and left a much more youthful market with paper-round wages to spend.

I've learned to take predictions with whole oceans full of salt, and rightly so. The full-price game market might have shrunk – there are not the same quantities of product littering the shelves as at one time – but the most eagerly-anticipated games seem to outsell everything, whatever the price.

Christmas might not be the best time of the year to make comparisons, but the four big titles the Christmas left every budget release for dead. Throughout the year, in fact, long-awaited full-price games have outsold their cheapie comrades.

Budget software houses have also found the need to expand their operations. Code Masters abandoned its mid-price plus label and launched a new range of £10 games and at the same time decided to hoik its cheapest games' prices by a quid. Alternative has had similar ideas, with its full-price label Again Again, and Zeppelin plans to follow suit.

The reason for all this see-sawing? Well, personally I think it's largely connected with how many pieces of gold 16-bit owners are willing to part with for their games.

When Mr Amiga next door is paying £25 for his software, a tenner seems positively good value.

Anyway, enough of this nostalgic chat. You'll be pleased to hear I am getting my own back on the forces of evil in *WIME*, and enjoying every minute of it.

Unlike its predecessors, this is not an adventure, but a wargame of gigantic proportions. There were some worries that 8-bit versions wouldn't survive the long and painful conversion process. Thankfully, the Speccy version hasn't been damaged in transit at all. The graphics are less spectacular, but the actual gameplay is just as absorbing. Thank Heavens Mike Singleton, author of *Lords of Midnight* and *Dark Sceptre*, and obviously a Tolkein fan, was given this particular assignment. A less tasteful software house might well have come up with a *Professional Hobbit Simulator* or something.

Strategic advance

Laser Squad was a brilliant strategy game released last year, which really cut the mustard with intelligent Speccy owners. Even unintelligent ones like me thought it was good.

Now those ever so nice people at Target Games have just released *Expansion Kit One*, which contains two new scenarios: *The Cyber Hordes* and *Paradise Valley*. These load into the main game and give more opportunities for you to be humiliated by the baddies once again.

Priced at £3.95, you can get hold of it from Target Games at **19 The Rows, Harlow, Essex, CM20 1BZ**.

Kindred spirit

My moan at the lack of 128-specific software a few issues ago prompted some interesting correspondence from P T Street of Devon:

"Back in the summer a 'Popular' computer magazine published a letter of mine bemoaning the lack of serious software for the Spectrum +3. The missive received mixed reactions in the ensuing weeks – some agreed, some didn't. It has been seven months since then and I have seen nothing to alter my opinion that a +3 is a nonentity to the majority of the software houses. It is, however, well supported by Tasman software and I have the highest praise for them. Any queries I have had with their programs have resulted in a reply by return post. Their programs include a word-processor, spell-checker, spreadsheet and a style writer for less than £20 each..."

Of course you're right, P T. The situation for +3 owners is definitely a depressing one. There's very little disk-based software around, and when a software house does decide to include +3 owners in its release plans you get a straight conversion from the 48K original and are expected to pay £5 over the odds (I've never quite worked that particular equation out – blank 3 inch disks only cost £1.50 more at the most). It's a shame, because I remember the enthusiasm surrounding the idea of a standard disk-based Spectrum.

Personally, I think it came too late and is overpriced, but who listens to me? Still, the +3 is reported to have sold well this Yule, which will hopefully jolt the software houses into life. They're usually pretty responsive when there's dosh to be made.

I've checked Tasman's address, and you don't seem to be related, so I can only assume it's a genuine plug from a satisfied customer. Not a lot of them about!

Robin Alway

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SECTOR 64 SECTOR

The Compunet story

Compunet is the most well-known modem network available for Commodore owners, but why has this system become so popular over the years?

It all started in 1981, when Nick Green became special projects manager for Commodore, and responsible for the educational side of things. An idea called PET NET – a modem link-up – came along. Nick went to America to see how things were done, and then went to the company Time Sharing for backup – which didn't want to know. However, two people from the company decided to joing Nick in partnership, and this was the start of Compunet.

Drop us a line

Have you got any tips, pokes of passwords for the latest games? If so, send 'em in. Or maybe you've got something to say about the world of the 64, or computing in general? Write to Sector 64, New Computer Express, 4 Queen Street, Bath BA1 1EJ.

Nick stated the requirements for the type of modem needed, which were then given over to Rod Wellburn, technical manager at Commodore. Ariadne Software was responsible for the modem software.

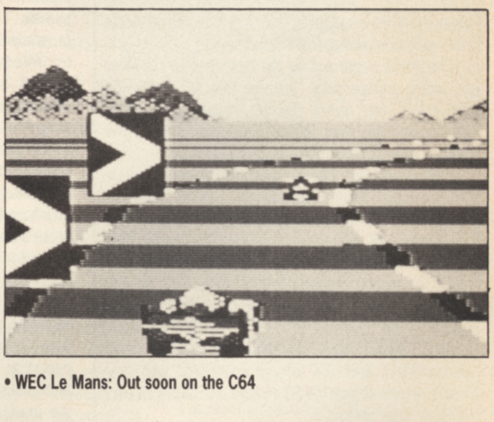
Compunet was finally born in September 1984, with Commodore owning 50 per cent of the shares at that time. Since then, Nick has bought a larger share of the company.

Now that Nick Green is boss of Compunet, there have been a lot of exciting changes, including a new system policy to give Netters the right to know exactly how the system works.

Also, a new directory has been set of for developments, so that people can know what new changes are going to be made. Compunetters can have their say about what changes they think should be made. You can put your point of view across by going to 'NICK'.

Ariadne Software is currently working on a new Amiga terminal with new features – it will be a 1200. The company has also produced a book for the Amiga, entitled *Kickstart Guide to the Amiga*.

Compunet is very proud to announce that there has been a major increase in uploads to Compunet, one being the very first official Amiga demo. Although there are many demos on the system already, after finding myself off the Net for a while I have noticed a lot of new, entertaining demos for the C64.



• WEC Le Mans: Out soon on the C64

Compunet's programmer Mark has made an excellent Auto Upload feature for the system, which means that the system automatically lists new uploads every 12 minutes. Another excellent new feature to the system is NETWHO. Type 'NETWHO' and you get to see which Netters are on-line. This is great, because you feel you're not alone. There is, however, some doubt about implementing an X-directory privilege for more popular Netters. Some people are worried that the minute they log on people will fill up their mail boxes.

DLINK is a great feature for the disabled, in that they can talk to others with the same problems. It's also great for the deaf, since they can mix with all the other Netters. One of Compunet's longest-standing members is 'MANIAC' has set a new craze for partyliners, with MERP (Middle Earth Role-Playing).

If you're thinking about joining Compunet, bear in mind that you could get 47,000 pages, which would permanently keep 110K on the Net. There are two types of subscription:

- £12 per quarter would cost 80p connection charge an hour
- £19.50 + £10 would give you unlimited connection charge (no 80p) + 47,000 pages

Compunet also features a very large news section, in NETFAX. It covers everything from reviews to the latest stories. NETFAX is updated every ten days, and is well worth checking out. We ourselves have a directory bulging with exciting demos and utilities. Just go to 'I+M', 'I+M2', 'I+M3', 'I+M4', 'I+MH' or 'I+MH1'. We go under the 'ID' of 'IJ1'.

New Releases

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The game is a sabotage mission set against three massive levels of arcade-style scrolling action. The C64 version is currently being written by the Imperial Designs team. It's reckoned to provide full-colour, smooth scrolling, brilliant music and devestating gameplay. The authors, gary Biasillo (*Dinamic Basketball* for Ocean and *Slayer* for Rack-It) and Ian Williams (*Slayer*), have managed to squeeze all three levels into one load.

WEC Le Mans ▪ Ocean ▪ about now!

Inner Space ▪ CRL ▪ about now!

Snare ▪ Thalamus ▪ a month or so

This is a puzzle game in the same style as *Boulderdash*

Search for Sharla ▪ Thalamus ▪ a month or so

A 3D-ish type game coming from the 16-bits

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CPC centre

Let there be light

Dave Buckingham phoned the other day. His company, Electric Studio Ltd (Tel 0462 420222), was once really well up on CPC add-ons. It did a light pen – possibly the best light pen – and a video digitizer, the latter now sadly discontinued due to lack of sales.

Anyway, they're back! They've taken the light pen idea a step further, and have got pretty advanced with work on a light "gun". I'm sure you've seen the sort of thing, either in the arcades or for the Nintendo. You aim at a target on the screen, pull the trigger and the computer works out if you've hit anything.

"We already have a working prototype, and we're working on a production line. What's really needed for this product, though, to make it successful, is software. The more games that have the option of using the light gun, the better," Dave told me.

Things haven't got as far as a price yet, though I'd guess somewhere in that vague £30-£50 area wouldn't be too wrong.

I know what you're thinking: oh yes, you're thinking, I'll believe it when I see it. Very wise too, but wouldn't it be something if the old CPC were to receive a boost like that? At a stroke it would have something that would make other games machine owners green, red and blue with envy.

Here, comms everybody!

Had an introduction to the Cage Comms ROM the other day. It's a comms package (I've started so I'll finish) that's especially designed for viewdata use, i.e. Micronet. Those users who log on to similar services but don't use the CCR should take a long, hard look.

I was impressed with the menu-driven ease of it all and the default loading of start up phone numbers and identification (password protected), but what really grabbed me was the auto message send. I set it to download 23 messages onto Micronet, and it took about 35 minutes. That saved me about 25 per cent of my normal costs, and I didn't have to keep watching over the computer's shoulder to make sure it was getting on with it!

They'd better be careful, or they'll make comms so easy and enjoyable they'll spoil it for the few of us who already know about it.

The CCR is available from Micronet (01 278 3148) and all good software retailers at £34.95.

By the way, a prize of £250,000 will be paid in cash by *Express* editor Rob Ainsley to anyone who can think of a new comms punning headline. Send your sidesplitter to: I Haven't Got That Kind Of Money At Least Not On Me, Express, 4 Queen St, Bath BA1 1EJ.

Telecomsoft landing

I visited Telecomsoft's London HQ last week, and caught a glimpse of the long-awaited *Carrier Command*. The game looks as if it finally is nearing completion. One reason for the delay was the graphics data: fitting 120K of it into a CPC is rather like fitting a quart into a pint pot. The graphics have now been shrunk sufficiently, and the program is going through the final stages of play testing. In a very short while you'll be sailing the seven seas and destroying your enemies. Watch out for it, it should be well worth the wait, if what I saw is anything to go by.

Barbaric Future

Remember *Barbarian*? You know, the one from Psygnosis? The one without Maria Whittaker? Plot: run around a fantasy world, hack monsters, leap over bottomless pits and avoid deadly traps. Not what you might call sophisticated. Anyway, Psygnosis are soon to release another game in the same vein, *Obliterator*. This time the setting is the distant future, when men are real men, women are real women and small furry creatures from Alpha Centauri get blasted into lots of little pieces.

You have a mission to complete: the destruction of an enormous and apparently invulnerable alien spaceship. You're mankind's last hope. I'm sure you're up to it.

Crazier still

Entertainment International are putting the finishing touches to the sequel to their average racing game, *Crazy Cars*. It has the mindblowingly original title of – £100 to the first correct answer, sorry you're too late – *Crazy Cars II*. The game, another driving game in the *Out Run* style, is still much the same with some improvements to the graphics.

Steve Carey

Boxing for babes

A new educational program has just been released. Fun School 2 *is by* Database (0625 878888), *whose* Mike Cowley *claims that it's "just what the CPC market is waiting for: properly designed educational software, beautifully boxed and at the right price." Well up to a point, Mike. It's £9.95 on tape, £12.95 on disk, comes beautifully boxed and does indeed seem to have a little more credibility than some other "educational" programs, where the only thing you learn is not to trust what you read on "beautiful boxes". In fact, software producers have always been adept at producing beautiful boxes: it's just the contents they sometimes screw up.*

Still, a brief glance at Fun School 2, *which comes in three versions – under sixes; six to eights, and over eights – suggests that this could be a winner. The under six year olds' version, for example, features games such as* Teddy Count, Write a Letter *and* Find the Mole, *all of which sound as if they have potential as grown up games. Graphics are big and simple, and the sound is suitably brash. It's always difficult, however, putting yourself in the place of a six year old (who said it's a little out of my depth?), and I hope to mug some unsuspecting citizen of the appropriate age with it before too long.*

It is encouraging, though, that educational software is still appearing, even if it is only one measly program so far in '89. Let's keep count, shall we boys and girls, and see if we can count to five before the year is out?

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PCW PATCH

Waste not want not

There is a concept of beauty summed up as 'form follows function' which Corbusier should have said even if he didn't. This is why a Mercedes driver can still admire an Austin Morris. If a machine performs properly 'improvements' are likely to be risible. Watching *Wordperfect* being used on a 20 Mhz 32-bit PC prompts these thoughts.

If using a PCW at 4 MHz (slightly less in fact) for word processing results in wasting ninety percent of CPU cycles waiting for you to think of a key to press, then a back of the envelope calculation shows that increasing the effective speed twenty times means wasting ninety nine point five percent of machine time.

This, surely, is carrying conspicuous consumption to ridiculous lengths even allowing for current levels of Americanization (sic). Word processing PC owners should join the Greens, buy a PCW, and help reduce this appalling level of waste.

Small hours small talk

There is a lot to be said for using the PCW as a comms machine, and I intend to say some of it. The first point is that since writers tend to work into the small hours of the night they can, when too exhausted to invent yet another complex name for a *Beautiful But Fundamentally Evil Succubus From The Depths Of Hell*, take advantage of both off peak telephone rates and the fact that many other hackers are asleep.

When you finally slope off from the writing, you want to unwind – well I do – and of course there are no games to play since the PCW isn't a games machine, right? No-one wants to do anything socially useful when exhausted. Something restful is called for, and what could be more restful than the latest gossip?

Most phone phreaks have experienced the irritation of repeatedly calling a brilliant bulletin board at 7 pm only to be met with a constant busy signal – why don't these people phone Maureen Lipman instead? Whereas at three in the morning the lines are quiet and there is nothing so relaxing as dialling up a board and reading the graffitti on the lavatory wall as it glides past at 300 baud.

Steve Patient

Loco tips

If you want to see how a section of text will print out without having to print out the whole document, copy the appropriate part into a block – 0 say. Exit the document and press D for 'direct printing'. Paste in the block by [PASTE]0 and press [RETURN]. The block is printed together with effects like bold and italic so you to see if it's right.

Another use for this is to copy the name and address of the recipient of the letter you're writing, print the letter, and then paste the details in direct printing with an envelope in the printer suitably lined up.

QL corner

Chessnuts

Anyone else noticed the electricity board TV ad showing *Psion Chess* boot up in the far corner? Richard Lang's very first 68000 program was *QL Chess*: the pin was indeed mightier than the sword! Lang has since gone from strength to strength. *Psion Chess*, produced by IS, David Levy's "Intelligent Software" (long since vanished), won shared first place at the World Micro Championship at Glasgow in 1984, running on even faster hardware. Refined continuously, the program won outright at Amsterdam in '85, Dallas in '86, Rome in '87 and a few weeks ago in Almeria.

Serious QL games freaks note that the first Computer Olympiad will be at Park Lane Hotel, August 9th - 15th. Loads of QL entries are expected. Phone 01-624 5551 for a list of the 20 game types to be contested.

Manualitis

Some authors assume a lot of technical knowledge on the reader's part. The documentation for a well-known QL program asks you to LOAD something, which gives rise to a "not found" message.

The author obviously meant EXEC, which is the QL command to invoke "tasks" (multitasking program units). Why not say so? The reason that LOAD gave an error is that LOAD assumes what it to be loaded in a *SuperBasic* program. On finding it isn't, instead of giving a sensible message such as "xyz isn't in Basic", the interpreter leads you to believe no such file exists.

Parakeet corner

Our Atari columnist recently expressed surprise that anyone would want to emulate a QL on an ST – he doesn't know what he's missing! Multitasking, a fully extensible language architecture with device independence, a fantastic Basic etc...

If I wanted a multicoloured noisemaker, I'd buy an ST – or a parakeet! But I wanted a serious computer, so I got a QL.

Eric Simmonds

Faster and better

There are many ways to accelerate the QL:

- ***First expand it – external expansion RAM works about twice as fast as the slow internal RAM, and programs will automatically use external RAM in preference to low-address internal stuff.***
- ***Add a floppy drive – you only really need one. A DS/DD floppy has ten times the capacity, up to 100 times the speed and about 1,000 times the reliability of a – yuck – microcartridge.***
- ***If you are writing in Basic, QLiberator, Supercharge and Turbo will give average speedups of about 7x, 20x and 30x respectively.***
- ***Irrespective of what you do with your QL, you'll benefit from a proprietary accelerator: Speedscreen gives about 2x and Lightning even more. The THOR XVI and Atari ST QL Emulator yield a further 2.5x through their use of 68000 12MHz technology. And there are rumours of a 68030 QL!***

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BEEB BOX

Broader VIEW

Who deserves to be the most unpopular person in the world? Some suitable candidates spring immediately to mind. A large number of politicians, for example, or *Sun* writers. But no, I honestly believe it to be the heathen who wrote the *VIEW* family of programs. They are totally user-hostile through and through, not to mention slow and featureless.

Good form

I've been looking at a program called A4 Forms Designer, from Mewsoft, that is the very antithesis of Double View in that it is a simple program designed with one task in mind; that of designing forms and printing them out on an Epson-compatible printer.

This it does very well with the minimum of fuss and a delightful user interface. Running in Mode 0, the program sports shadowed drop down menus, and can use either the computer's characters or the printer's own in NLQ mode.

Printing time is between five and ten minutes, depending on mode on an FX850, so it may be longer on other printers.

It can equally well act as a simple word processor, or as a report generator for databases. Two extension packages are available for those with more complex needs, and stablemates include the popular Fax*file Organiser, and a forthcoming label printer. Mewsoft are on 01-267 2642.

Now I am sure that there are outraged *VIEW* fans out there saying "But he doesn't know what he's talking about!" Wrong! I have used them for budgeting a magazine, but I still hate them.

At the Double

Now, however, comes salvation, in the shape of *Double View* from Tubelink. This is a suite of programs designed to enhance both the user interface and the functionality of *VIEW* and *VIEWsheet*. Does it succeed in doing so?

In a word, yes. However this is a complex product, and the space I have here is very limited, so I am going to examine various features of the program over the next few weeks.

First, however, here is a quick tour of some new features:

- Speed increase by up to 35%
- Menus and help on-screen
- Two documents in memory at once
- Auto-save and disk buffering
- A more effective way of handling multiple document files.

My overall impression, and this is a compliment, is of similarity to CP/M-type word processors such as *WordStar*. The price is a hefty £39.95, and the software is restricted to Master 128 and compact computers, as sideways RAM is required. Tubelink can be contacted on 01-205 9393.

Finally here is my tip for *VIEW* owners. GET A VERY LARGE HAMMER AND SMASH...

Andrew Brown

MSXTRA

Desktop dream

I know that there are only a few hundred MSX 2 users in the UK, which means that only a few MSX 2 games get released over here. For a greater selection of software you must venture over to Holland, Germany or Spain. If you want a good MSX 2 desktop publisher or word processor, the choice is very limited.

On-line Link

I have already mentioned MSX Link, which is just one of the many MSX user groups in the UK. David Webb, who runs the group, has asked me to point out that they will be going "on line" in February. To have a look at the LINK mail box on Vernon Wyland's system (051) 531 6464, the code is MBX 0300 17. This box is available now.

While I'm on the subject of MSX user groups, I will be fair to all the others and give them a mention, and a rundown of the services each offers, in a future edition of Express.

Dynamic Publisher, from a company called Radarsoft, is a good, easy-to-use DTP. An English version has just been released, and can be obtained by contacting the UK user group *MSX Link*. Send an SAE to David Webb, 11 Ayscough Avenue, Spalding, Lincs for details and price, or phone 0775 3433. I will delve deeper into the facilities offered in *Dynamic Publisher* in a future issue.

An MSX version of *Tasword* is available on disk in Germany, but I have no supplier's name as yet.

A version of Computermates' *MSX TEXT* is also available for the MSX 1 and 2. It supports both the 40 and 80-column screen, and can be recommended for home use. This utility is available in the UK and can be bought from the better MSX software stockists.

Pacman lives?

US Gold has sent me a copy of *The Pepsi Challenge, Mad Mix* for review, and as I've already read none too complimentary reviews of this game on other formats, I wasn't expecting too much of it. I was more interested in how well the Spanish programmers write for the MSX.

Impressions of the game? Frankly, it's *Pacman* with added features – such as icons you can run over which transform the Pepsiman into a more formidable creature. The mazes are quite varied, and the early levels fairly easy.

I must say, I didn't find *Pepsi Challenge* as bad as I had expected. This is probably because the MSX version has been quite well programmed, and although it uses manly black and white, the graphics move well.

Sometimes the icons are hard to tell apart, especially when things get a bit hairy, but then you don't want the game to be too easy, do you?

One thing though – whoever drew the loading screen knew what he was doing. It's very well done, and is an encouraging sign for Topo Soft's future MSX releases.

Keith Neal

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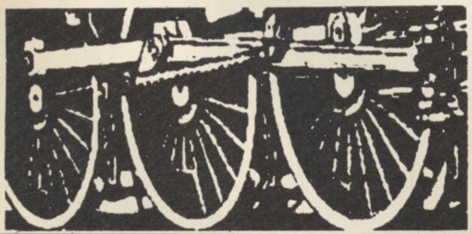

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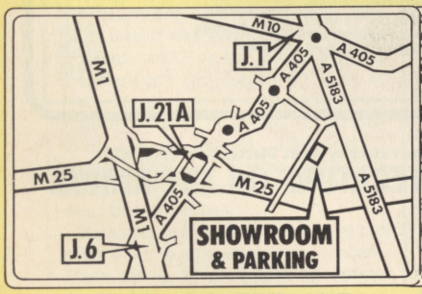

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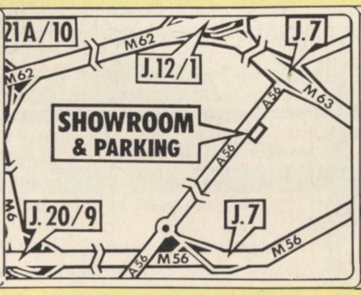

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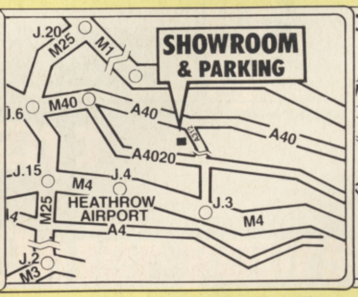

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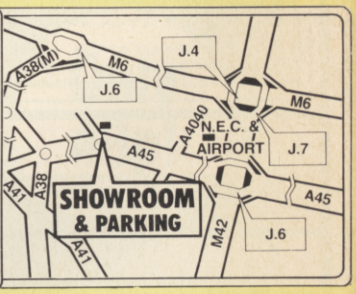

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